PB86-174281

Report to Congress on Training for Operators of Publicly Owned Wastewater Treatment Plants

(U.S.) Environmental Protection Agency
Washington, DC

Feb 85

U.S. Department of Commerce
National Technical Information Service
NTIS

TECHNICAL REPORT DATA *(Please read Instructions on the reverse before completing)*		
1. REPORT NO.	2.	3. RECIPIENT'S ACCESSION NO. PB86 174281/AS
4. TITLE AND SUBTITLE Report to Congress on Training for Operators of Publicly Owned Wastewater Treatment Plants		5. REPORT DATE February 1985 6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S)		8. PERFORMING ORGANIZATION REPORT NO.
9. PERFORMING ORGANIZATION NAME AND ADDRESS EPA - Office of Water OMPC 401 M. Street, SW Washington, DC 20460		10. PROGRAM ELEMENT NO. 2BG647 11. CONTRACT/GRANT NO.
12. SPONSORING AGENCY NAME AND ADDRESS EPA Office of Water 401 M. Street, SW Washington, DC 20460		13. TYPE OF REPORT AND PERIOD COVERED 14. SPONSORING AGENCY CODE 700/02
15. SUPPLEMENTARY NOTES		

16. ABSTRACT

This report of the Enviornmental Protection Agency to the U.S. Congress on the development of imporved wastewater treatment plant operator training programs to assist publicly owned facilities compliance to the Clean Water Act.

17. KEY WORDS AND DOCUMENT ANALYSIS		
a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Clean Water	operation and maintenace of a wastewater treatment plant	
18. DISTRIBUTION STATEMENT	19. SECURITY CLASS *(This Report)* non-sensitive	21. NO. OF PAGES 61
	20. SECURITY CLASS *(This page)* non-sensitive	22. PRICE

EPA Form 2220-1 (9-73)

United States
Environmental Protection
Agency

Office of Municipal
Pollution Control (WH-546)
Washington DC 20460

February 1986

PB86-174281

EPA

Report to Congress on Training for Operators of Publicly Owned Wastewater Treatment Plants

REPRODUCED BY
NATIONAL TECHNICAL
INFORMATION SERVICE
U.S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA. 22161

REPORT TO CONGRESS

ON

TRAINING FOR OPERATORS OF PUBLICLY OWNED WASTEWATER TREATMENT PLANTS

By

ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF WATER

WASHINGTON, D.C.

February 1985

EXECUTIVE SUMMARY

This is the report of the Environmental Protection Agency (EPA) to the United States Congress on the development of wastewater treatment plant operator training programs for improved publicly owned facilities compliance requested in the May 23, 1984, report (98-803) of the House Subcommittee on Appropriations for HUD and Independent Agencies.

Background

EPA and the States agree that effective operator training is an important factor in a treatment facility's ability to meet its effluent and operations and maintenance requirements. However, it is also clear that lack of effective enforcement, problems with facility design and construction, infiltration and inflow; and inadequate local financial management and lack of local support to effective operations and maintenance also contribute significantly to plant performance and compliance problems. EPA and States need to implement coordinated, compliance-oriented programs that ensure the most appropriate responses to identified compliance problems.

With respect to the operator training component of this approach, EPA's long-term strategy has been to build an effective, self-sufficient State training base. Between 1971 and 1981, EPA's efforts focused on training of State trainers, development of curricula and materials, and construction of State training centers. EPA also established the Instructional Resources Center at Ohio State University to serve as a repository for training and instructional materials and to operate a national information clearinghouse and retrieval system. The Center recently became self-supporting. Since 1982, using congressional add-on funds, EPA also has been providing grants to States to develop onsite training and technical assistance capability for solving problems in small communities and grants to a national organization to identify and help States implement the elements of effective, compliance-results-oriented State and local training programs. EPA has also developed computerized diagnostic models to help States identify operations, management, and design and construction problems to target responses to noncompliance.

Although nearly all States already have some elements of a model training program in place and a few States are very close to achieving effective and self-sufficient training programs, each State will require additional actions to achieve the overall objectives of an integrated State/local/private sector training and technical assistance program oriented to achieving compliance results.

Although State and Federal compliance, assistance, and training efforts are increasing, local governments have primary responsibility for operating and maintaining their facilities in compliance. While most larger facilities are in compliance, small communities continue to have significant compliance and performance problems. Small communities have not received comparable levels of compliance attention and have not been able to obtain governmental or private sector technical and financial management assistance to solve problems.

Several national training and other associations that received EPA financial and institutional support provide comprehensive coordination and assistance to State and local governments. An estimated 24 State operator associations sponsor ongoing operator training activities. The Water Pollution Control Federation is promoting a national operator association that will coordinate information and encourage operator training. In addition, many State and local operations and maintenance and training programs rely heavily on private-sector training and technical assistance. There are increasing opportunities for the private sector to assist grantees implementing first year performance certification requirements; to develop contractual arrangements for contract construction, operations and maintenance; and to develop innovative ways to deliver training and technical assistance to small communities.

Status of State Grant Projects

Since 1982 Congress has added $11,953,000 to EPA's budget to support operator training. Congress added $4,103,000 in 1982 and approximately $2,600,000 each for fiscal years 1983, 1984, and 1985. As directed by Congress, the bulk of the 1982 and 1983 add-on training funds have been awarded to States to help 850 communities by providing compliance-oriented on site training and technical assistance to operators of small Federally funded treatment plants. The 1984 funds were awarded to 31 States late in the fiscal year; these States will initiate work shortly to conduct diagnostic evaluations and provide technical assistance to additional operators. Using these funds, several States are also developing financial management guidance and assistance programs.

Although States will not complete work until 1985 in most of the 842 projects funded in 1982 and 1983, compliance has already been attained at 352 plants, and effluent and operations and maintenance performance has been improved at 132 additional plants. In addition, State efforts have resulted in improved local decisionmaker involvement in plant operations and maintenance and financial management; improved process control methods and laboratory and recordkeeping practices; introduction of preventive maintenance programs and improved repair of equipment; reduced energy and sludge handling costs; improved infiltration/inflow management; and identification of operator certification and continuing education needs.

A major objective and accomplishment in award of FY 1982 and 1983 funds was to obtain maximum State participation in this program. By the end of 1984, only one State, certain territories, and the District of Columbia were not participating in this training effort. Award of FY 1984 funds was more selective. Funds were awarded to 31 States that had demonstrated a commitment to this effort as reflected in funds expenditures and compliance improvement. Award of FY 1985 add-on funds will also emphasize support to results-oriented State programs.

National Survey and Evaluation

To help evaluate State and local training capability, to identify the essential elements and costs of an effective State operator-training program, and to develop Federal, State, local, and private sector action plans, EPA has funded studies by the National Environmental Training Association (NETA), the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA), and the National Demonstration Water Project (NDWP). Representatives of NETA, ASIWPCA, and the National Association of Towns and Townships (NATaT) also have participated on a work group with EPA in developing this report.

Characteristics of State Operator Training Programs

States report total 1984 operator training budgets of approximately $10.2 million. About 19 percent or $2 million was from local sources, 38 percent or $3.8 million from State sources, and 43 percent or $4.3 million from EPA funds. Annual State training budgets range from $25,000 to over $900,000, with most ranging between $100,000 and $400,000. Local funding is generally from course tuition, fees and certification charges. Federal funds are obtained under Clean Water Act sections 106, 205(g), and 104(g)(1).

States average about four full-time trainers, but the vast majority of staff are part-time. It appears that a significant amount of additional training and technical assistance is provided by other State personnel in conjunction with management of construction grants and compliance programs.

Operator training programs are conducted mainly through State environmental agencies and State training centers. State training centers are generally associated with junior colleges or vocational education institutions. These centers serve as Statewide training resource centers and provide primarily entry-level and upgrade training. As State training programs have matured, program objectives and resources have expanded to emphasize continuing education and technical assistance as well as operator certification. Nearly all States (44) have mandatory operator certification programs. The majority of operators are certified and receive continuing education training annually.

Conclusions

Roles and Responsibilities

As the Agency, the States, and local governments work toward improved publicly owned facilities compliance, including coordinated, compliance-oriented, and self-sufficient operator training programs, it is important to articulate the basic roles and responsibilities that Federal, State and local governments and the private sector will be expected to fulfill.

Overall responsibility for operator training and plant compliance rests with local and State governments. Local governments are expected to see that their plants comply with their effluent-discharge permits, maintain effective financial management and user-charge systems and operations and maintenance programs, and obtain training for their operators where needed. States are expected to develop, administer, and finance effective training programs, to help especially small municipalities comply with discharge requirements, and to take appropriate enforcement actions where necessary. The Federal role is one of oversight and assistance where needed to assure that needed programs are developed and implemented to improve compliance.

Model State Program

As requested by Congress, EPA has defined the essential elements of a model State operator training program and is working now with NETA and States to identify the implementation costs in each State. The elements of a model program include: 1) an integrated compliance program that provides coordination among all involved State agencies and the private sector; 2) a training needs assessment process; 3) an action plan that meets training needs, sets priorities, and allocates resources; 4) a training delivery system that coordinates training delivered by government and the private sector and provides the most appropriate types of training, training materials, and technical assistance; 5) a mandatory operator certification program that measures operator competency in the plant, and provides for annual inservice training and recertification as appropriate; 6) a management information system that provides essential information for program management and documents compliance results of training; 7) State staff training to ensure that trainers remain current in new technological developments and training approaches and can provide effective outreach assistance to operators and communities; 8) a public education program targeted to local officials and the general public to promote improved understanding of compliance responsiblities and support for investment in operations and maintenance and operator training; and 9) adequate long term fiscal support from local and State sources to maintain effective training programs once Federal funding support is no longer provided.

Action Plans

EPA has been working with representatives of each level of government, trainers, and the private sector, to develop proposed Federal, State, local, and private sector action plans to achieve overall compliance goals and objectives. These detailed action plans, described later in the report, define needed overall management actions for coordinating each aspect of the compliance program and actions keyed specifically to operator training program development. States and local governments should evaluate these recommendations in light of their current programs and begin to implement needed improvements as quickly as possible.

EPA has already taken a number of actions. These include issuance of the National Municipal Policy and Financial Capability Policy, revised regulations, and new financial and technical information and guidance for State and local governments. The agency also conducted a national conference in May at Atlanta, Georgia bringing together State training officials and EPA staff to discuss development of effective, self-sufficient operator training programs and to share information on onsite training and technical assistance programs. An Administrator's Task Force on Incentives for Improved Operations and Maintenance was established and issued a report that has formed the primary basis for a number of additional initiatives that are currently underway or being considered. EPA also is working with NETA on a 3-year project to help States develop specific action plans for implementing more effective operator training programs.

At the State level, support for additional, compliance-oriented operator training and technical assistance efforts appears to be increasing. States also appear to support development of self-sufficient operator training programs as quickly as possible. Local governments, especially in small communities, need to begin placing more emphasis on and committing more resources to effective operations and maintenance of their plants and to operator training. The additional actions identified at each level of government will, over time, improve compliance by all publicly owned wastewater treatment plants.

REPORT TO CONGRESS
ON
TRAINING FOR OPERATORS
OF PUBLICLY OWNED WASTEWATER TREATMENT PLANTS

I. INTRODUCTION

A. Purpose

This is the report of the Environmental Protection Agency (EPA) to the United States Congress on the development of improved wastewater treatment plant operator training programs to assist publicly owned facilities compliance. The report was requested by the House Subcommittee on Appropriations for HUD and Independent Agencies in Report 98-803 dated May 23, 1984.

B. Background

1. Federal, State, and Local Roles

EPA and the States agree that effective operator training is important to help ensure that local wastewater treatment plants, many of which have been constructed with Federal funds, meet effluent permit requirements and are operated and maintained effectively. Primary responsibility for operator training and plant compliance rests with State and local governments. States are expected to develop and administer coordinated Statewide compliance programs, including effective operator training programs, to provide technical assistance where appropriate to help municipalities comply with requirements, and to take appropriate enforcement actions. Local governments are required to maintain their plants in compliance with effluent-discharge permits; maintain effective financial management, user charge, and operations, maintenance and management programs; retain trained operators; and obtain training for their operators where needed. The Federal role is to assure development and implementation of comprehensive and coordinated State and local programs to improve overall municipal wastewater treatment facilities performance and compliance.

2. Large Plant - Small Plant Compliance

A top priority of the EPA is to assure that municipal wastewater treatment facilities are constructed, operated and maintained to meet design and effluent discharge permit requirements. Since 1972 the Federal Government has spent almost $37 billion to help communities pay for construction of publicly owned wastewater treatment plants that meet the effluent requirements of the Federal Clean Water Act (P.L. 92-500), as amended. Although the vast majority of plants funded since 1972 that treat more than 1 million gallons of wastewater a day comply with their permits, small plants tend to have significant performance and compliance problems. Small plants represent about 90 percent of the total number of facilities built since 1972 though they account for only about 10 percent of total municipal wastewater flow. While overall EPA and State municipal compliance efforts have increased substantially, small plants are unlikely to receive substantial direct compliance emphasis due to limited Federal and State resources and national emphasis on noncomplying plants with the greatest water quality impacts.

3. Operator Training and Small-Plant Compliance

A key factor in compliance problems at small plants is that the operators, although usually certified, often lack the necessary technical knowledge and mechancial skills needed to operate, maintain and manage the treatment plant. Typically these plants are operated by one person who is responsible for all aspects of plant operations and maintenance and who also often has to combine plant operations with other municipal duties. This has meant insufficient attention to plant operation and maintenance and little or no time for needed offsite classroom instruction or "hands-on" training at a wastewater treatment training facility. These small plants generally have not received much State attention or assistance and have not been able to obtain private sector help.

4. Results-Oriented Operator Training

Effective operator training and technical assistance are important elements in the treatment plant's ability to meet its effluent permit. Improved plant performance and permit compliance are the ultimate gauges of training success. Head counts of operators trained, upgraded, or certified, important as these factors are, represent only intermediate, process measures. Training programs must be able to deliver personal on-the-job assistance to the operator at the treatment plant as well as traditional classroom and textbook instruction and must be oriented to improved plant performance and compliance. Training programs must demonstrate that training produces cost-effective solutions to plant noncompliance to draw needed financial support from State and local governments.

5. Other Factors Affecting Compliance

Problems with facility design, selection of treatment technologies, infiltration and inflow, inadequate financial management by the local government, lack of effective enforcement to spur corrective action at problem plants, and lack of information by local officials on their responsibilities also contribute to poor plant performance and noncompliance. This report focuses on operator training but also interrelates overall Federal, State, local, and private sector efforts needed to frame integrated approaches to improve performance and compliance at municipal wastewater treatment plants.

C. Congressional Add-on Funds

The fiscal 1985 appropriation of $2.6 million additional Congressional add-on funds brought to $11.3 million the total amount of operator training funds added by Congress to EPA appropriations for fiscal years 1982 through 1985.

1. Grants to States

As directed by Congress, the bulk of the add-on training funds are at work in the States assisting compliance-oriented training programs for operators of treatment plants with capacities of less than 5 million gallons a day (mgd). Onsite training and technical assistance programs are underway in 49 States, reaching approximately 1,000 small plants with compliance problems. Most of the plants have capacities of less than 1 million gallons per day and serve fewer than 10,000 people. Training and technical assistance is provided onsite and over-the-shoulder by experienced trainers selected by State training centers, other responsible State agencies, or a national training association. Trainers use EPA-developed computer-diagnostic programs to identify a plant's design, operational, and financial management problems that are causing poor plant performance and noncompliance and to target needed training and technical assistance activities. State and EPA data show that the program is having a very significant impact in bringing plants into compliance, improving effluent performance, and improving overall operations and maintenance.

2. Grants to National Organizations

The EPA Office of Water has provided funds to several national organizations to identify essential elements and costs of State operator training programs, to help States implement coordinated, compliance-oriented operator training programs, and to evaluate State training capability. The national organizations include the National Environmental Training Association (NETA), the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA), the National Demonstration Water Project (NDWP), and the American Clean Water Association (ACWA). These organizations have provided invaluable assistance in developing this report and formulating action plans for effective operator training and improved municipal facilities compliance.

D. Final Report

The material in this report reflects significant input by representatives of NETA, ASIWPCA, the National Association of Towns and Townships, selected local officials, and EPA regional offices. The report provides updated information on the status of State operator training programs; State accomplishments to date using congressional add-on section 104(g)(1) funds; EPA, State, local, and private sector roles and responsibilities; the elements of a model State operator training program; and a multiyear plan for needed additional actions by each level of government and the private sector for improved operator training and publicly owned facilities compliance.

II. HISTORY AND STATUS OF FEDERAL OPERATOR TRAINING PROGRAMS

A. Federal Program Summary

The Federal goal is to protect the public investment by developing a national base of skilled water pollution control personnel, technical information materials, and effective State and local programs to assure that wastewater treatment plants, especially those built with Federal funds, are operated, maintained, and managed to comply with their effluent discharge permits. The Federal operator training effort has progressed through various stages. From 1967 to 1971, the focus was on direct training of operators. From 1971 to 1977, the program shifted to greater reliance on the States by training State trainers and building State training centers. From 1977 through 1981, extensive curricula and training materials were developed for State use. Since 1981, EPA has been working with States and national organizations, primarily using congressional add-on funds, to implement onsite training and technical assistance programs for small communities; to define the elements and costs of effective, compliance-oriented State and local operator training programs; and to accelerate implementation of more effective, self-sufficient programs.

In support of these objectives and activities, EPA's National Municipal Policy requires compliance by these facilities as soon as possible, and not later than July 1, 1988, except in extraordinary circumstances. The policy requires that all publicly owned treatment works meet statutory compliance requirements whether or not they receive Federal funds. Already constructed publicly owned treatment works that are not in compliance must develop a plan and schedule for achieving compliance. Municipalities that require construction must also develop a plan that documents treatment needs, costs, a financing approach, and a schedule for achieving compliance as soon as possible. Operator training has an integral role in the plan's implementation since training can improve plant performance and, through effective operations and maintenance, minimize the need for capital investments.

B. Federal Program Accomplishments

Over the past 17 years, EPA and predecessor agencies have invested approximately $75 million in operator training-related programs, including specific training programs and other State grants support. Over 20,000 operators and State trainers have been trained. A wealth of water pollution control curricula and training materials have been developed and are being used by State agencies, training centers, other educational institutions, and training and water pollution control associations.

Of the total Federal funds, $15.6 million went to programs funded under the 1962 Manpower Development and Training Act (P.L. 87-415) which funded entry level and upgrade training. Approximately $27 million went to programs funded under section 5 of the Water Quality Improvement Act of 1970 (P.L. 91-224) and section 104(g)(1) of the 1972 Water Pollution Control Act Amendments (P.L. 92-500) which authorize operator training pilot programs; and $10 million went to fund establishment of 27 State training centers under section 109(b) of the 1972 Act and 1977 Amendments (P.L. 95-217). Significant amounts of construction grant funds have been used to provide facility startup assistance to communities and operators and to develop operations and maintenance manuals. In addition, the 1981 Amendments (P.L. 97-117) provide expanded statutory requirements for communities to include operator training under first-year startup assistance. States also have continued to receive Clean Water Act sections 106 and 205(g) funds for operator training and operations and maintenance management activities. Section 104(g)(1) congressional add-on funds have been provided since 1982 to support onsite training and technical assistance to operators of small treatment plants. Uses of these funds are discussed in detail in a later section of this report.

The Instructional Resources Center (IRC) at Ohio State University in Columbus, Ohio, established under an EPA grant, operates a national information clearinghouse and serves as a repository for training and instructional materials developed by EPA, States, and the private sector. IRC houses the Instructional Resources Information System (IRIS), a national computer information and retrieval system that lists thousands of available instructional resources. IRC also publishes a quarterly newsletter; sponsors conferences, workshops, and seminars; and operates a lending library of audiovisual materials. The Center handles over 4,000 requests each month primarily from plant operators and supervisors. The IRC reviews training materials and annually accepts about 1,000 into IRIS. The Center mails out 20,000 newsletters each month and receives approximately 200 requests for information daily. Over 1,500 slides and 20 videocassettes are duplicated for loan each month. The Center became self-supporting in 1984.

More detailed information on the history and development of the Federal program is contained in a report issued by EPA's Office of Water in 1983 entitled "Operator Training Programs" and in the Preliminary Report to Congress on Training for Operators of Municipal Wastewater Treatment Plants submitted March 1, 1984.

C. Elements of National Training Base

1. State Training Centers

Twenty-six States, the District of Columbia, two territories, and one interstate agency now operate dedicated training centers; 27 of the centers were funded under section 109(b) of the Clean Water Act. The States of Alabama, Alaska, Louisiana, Nebraska, Montana, Hawaii, Oregon, and Puerto Rico are considering establishing 109(b) centers. Attachment A lists existing training centers.

2. National Associations

Several national associations that received startup or continuing financial and institutional support from EPA continue to provide a comprehensive coordination and assistance capability to State and local governments. These associations include the Joint Training Coordination Committee (JTCC), the National Environmental Training Association (NETA), the National Demonstration Water Project (NDWP), the American Clean Water Association (ACWA), and the Association of Boards of Certification for Operations Personnel in Water and Wastewater Utilities (ABC). The Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) provides an important coordination function across all State water pollution control programs. The Water Pollution Control Federation (WPCF) is also actively involved in education and private sector coordination. The Federation is promoting establishment of a national operator association to coordinate information and encourage operator training. The Federation publishes a monthly magazine on plant operations written for and directed to plant operators.

3. Operator Associations

An estimated 24 State operator associations sponsor some of the strongest and most effective operator training activities. Some work closely with State agencies to conduct and coordinate training courses and Statewide conferences. These associations generally were established with strong support from the Water Pollution Control Federation.

4. Private Sector

Every State and many local governments rely heavily on the private sector to provided needed training and technical assistance. In several cities private contractors are responsible for overall facility operations and maintenance and operator training. Contractor involvement in operator training is expected to expand in conjunction with new statutory requirements that grantees certify that their facilities are in compliance with effluent requirements by the end of the first year of plant operation. There are also increasing opportunities for private sector support in small communities using innovative on site approaches and computer technology.

III. STATE ON SITE TRAINING AND TECHNICAL ASSISTANCE ACCOMPLISHMENTS

A. Allocation of Section 104(g)(1) Congressional Add-on Funds

In FY 1982, Congress added $4.1 million to EPA's budget to assist State operator training program activities and to pay salaries of EPA staff responsible for administering operator training programs. The congressional Conference Committee on Appropriations language directed that the funds be used to improve municipal wastewater treatment facilities compliance, especially in small facilities, through onsite training and technical assistance. Of the add-on funds, $3,292,000 was awarded to 35 States. Implementing Congressional directions, funds were allocated to States based on the following criteria:

o The majority of the funds should be awarded to States with State training centers established under section 109(b) of the Clean Water Act or other State authority;

o Funds should be targeted to small Federally funded facilities (generally under 5 mgd effluent discharge) experiencing compliance problems;

o A diagnostic evaluation should be performed for each facility selected by the State to determine whether compliance problems were operator-training-related and, if so, to determine the types of site-specific technical assistance needed;

o Onsite, over-the-shoulder technical assistance should be provided by experienced operations and maintenance personnel, preferably State employees;

o Followup site inspections should be conducted to evaluate the effect of training and technical assistance and to assure continuing performance improvement; and

o The State should evaluate and document the training and technical assistance efforts, including before and after facility performance and effluent data.

In addition, $575,000 was awarded to a consortium of the National Demonstration Water Project (NDWP), the National Environmental Training Association (NETA) and the American Clean Water Association (ACWA) for technical assistance to 6 States; and $67,200 was awarded to the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) to summarize and evaluate State operator training programs.

In FY 1983, the Congress added $2,625,200 to EPA's budget request. Conference committee language directed EPA to continue the policy direction established in 1982. The language also required the Agency to conduct a national study through a national environmental training organization to determine the effectiveness of the onsite training and technical assistance approach, to define the critical common elements of effective State operator training programs and the costs of implementing such programs, and to evaluate the status of each State with respect to achieving programmatic and financial self-sufficiency for operator training.

The majority of the FY 1983 funds were awarded to 48 States and 1 territory, 35 of which had also received FY 1982 funds. By the end of FY 1983, only 2 States, the other territories, and the District of Columbia were not participating in this effort. A 2-year grant was also awarded to NETA in 1983 to conduct a national program evaluation. Information from the NETA project is contained in the following sections on overall State programs status; development of model State programs; and Federal, State, and local and private sector action plans.

The agency's FY 1983 funding guidance essentially continued the FY 1982 funding criteria. However, the Agency also urged States to use a portion of the funds to provide financial management technical assistance to communities in addition to operator technical assistance, and to develop Statewide financial management policy guidance. This additional emphasis was based on the Agency's recognition that performance and compliance problems are also caused by inadequate local financial management and inadequate user charges for operations and maintenance. Improved financial management and updated local user charge systems are also critical to improved compliance. Limited funds were also awarded to selected States to describe their operator training programs.

The FY 1984 appropriation again provided $2,625,000 to EPA to maintain this effort. The Conference Committee also directed submission of a report which was submitted by the agency on March 1, 1984. Using FY 1984 funds, a $500,000 grant was awarded to NDWP to continue their successful training and technical assistance efforts and to work with selected States to assist operator training program development, provide financial management technical assistance, and support progress toward self-sufficiency. A grant was also awarded to NETA to work with 13 States identified as having generally effective operator training programs to develop individualized action plans for achieving programmatic and fiscal self-sufficiency. These States also received supplemental grant funds for needed program development support. Allocation of FY 1984 funds to States was completed by March 1984 and all grants were awarded by September 30, 1984.

A major objective and accomplishment in award of FY 1982 and FY 1983 funds was to obtain maximum State participation in this program. Award of FY 1984 funds was more selective. The FY 1984 funds were targeted to States that had demonstrated a commitment to this effort as reflected in funds expenditure and local compliance improvement. States that had not made significant progress since award of FY 1982 funds and that had adequate funds remaining did not receive FY 1984 funds. A total of 32 States received FY 1984 funds, including one State (Kentucky) that had not accepted a grant previously.

Congress added $2,600,000 to EPA's FY 1985 budget. These funds will be allocated almost entirely to States in the near future. The agency intends to use the same allocation approach as with the FY 1984 funds, emphasizing support to selected States with demonstrated compliance improvement results and commitment to onsite training and technical assistance in small communities. A portion of the funds will be awarded to NETA to continue assisting development of effective State operator training programs in 23 selected States. The elements of a model State program are described in detail in the State Action Plan section of this report.

B. Status of Grant-Funded Projects

Attachment B lists State accomplishments to date in each community provided assistance using 1982 or 1983 section 104(g)(1) grants. Attachment C provides State-by-State funding status, diagnostic inspection and technical assistance commitments, and summary accomplishments to date.

States awarded FY 1982 funds have generally completed the majority of their work in most of the initial communities selected for technical assistance. However, most of the grants provide for extended followup monitoring and assistance through FY 1985. Most States experienced startup delays on their initial grant (in FY 1982 or 1983) averaging 9 months for staffing, internal State coordination and approvals, and grant-funded procurement of minicomputers and diagnostic modeling programs. As a result, even some FY 1983-funded work programs are just completing the problem diagnostic evaluations in communities prior to selecting plants for onsite training. Grants using FY 1984 funds were generally not awarded until late September 1984, and work has not been initiated in any of the additional communities.

Based on negotiated FY 1982 and FY 1983 grant work plans, funds were provided to 48 States and to the National Demonstration Water Project (NDWP) to conduct over 1,100 facility problem diagnostic inspections, to provide onsite technical assistance and training at about 850 small facilities, and to develop 10 Statewide financial management guidance and assistance programs. The funds awarded NDWP supported a 2-year technical assistance demonstration project in six southern States, including West Virginia, South Carolina, Tennessee, Mississippi, Louisiana, and Kentucky.

The information from States and the NDWP project indicates the onsite training and technical assistance program efforts are achieving important compliance improvements and demonstrating the value of training and technical assistance to these small communities. Operators in a total of 842 plants are being provided training and technical assistance. States are still working in 412 of these plants. As of November 1984, full compliance has been attained in 352 of these plants with significant performance improvement shown at 132 additional plants. With the exception of a few plants where design, construction, or major institutional problems preclude a training and technical assistance solution, the agency expects that essentially all of these plants will achieve compliance by the end of FY 1985. The data also show that the onsite assistance is:

- Improving local decisionmaker involvement in plant operations and maintenance and financial management;
- Improving treatment process control management;
- Introducing preventive maintenance programs and ensuring repair of equipment;
- Reducing energy and sludge-handling costs;
- Improving laboratory, recordkeeping, and reporting practices;
- Improving infiltration/inflow management; and
- Identifying operator certification and continuing education needs.

Evaluation of the NDWP and State efforts has also identified a number of issues and pitfalls for States to avoid. Evaluation has indicated the importance of:

- Problem diagnostic modeling and inspections to assure that problems relate to training rather than to design or financial management;
- Good effluent monitoring data and reports upon which to base an evaluation of compliance improvement;
- Effective local treatment and financial management and community recognition of compliance problems;
- Onsite followup to ensure continuing attention to problems;
- State coordination and support, including compliance actions, to reinforce operator training, operations and maintenance, user charge, and effluent monitoring/reporting requirements.

IV. STATUS OF STATE OPERATOR TRAINING PROGRAMS

In support of the March 1984 EPA Preliminary Report, ASIWPCA and NETA queried States on organizational structure; budgets; staffing; training program objectives, procedures, and requirements; and future training directions and needs. Appendix D reflects updated data on current programs in all States.

A. State Organization

Operator training programs are conducted primarily through State environmental agencies and State 109(b) or other established training centers. Within the State agencies, training may be a separate organizational function. More often, operator training functions have been integrated into the compliance or construction grants program management organization. Even where the State 109(b) training center is identified as the lead State entity, training also occurs within other elements of the water pollution control program.

State water pollution control personnel often exercise multiple responsibilities, including operator training, delegated construction grants management, operations and maintenance, and compliance and enforcement. Training personnel may be involved, appropriately for integrated program management, in conducting facility plan and specification reviews; providing facility start-up services; and conducting operations and maintenance reviews, compliance evaluations, and compliance inspections. Staff directly responsible for these activities also may provide onsite technical assistance and informal training to operators while working with new facilities concerning performance certifications or while conducting compliance evaluations.

Section 109(b) or other training centers generally are associated with State junior colleges or vocational education institutions under the State education departments. Their responsibilities may include Statewide training coordination. These centers are usually training resource centers and provide primarily entry-level/certification and upgrade training. State departments of health also have significant direct or coordination responsibilities in a number of States relating to operator certification training.

B. Training Program Administration

As State training programs have matured, program objectives and resource allocations have expanded to include continuing education and technical assistance as well as operator certification. Although there are a wide range in individual categories among the States, the "average" State's priorities and resources are distributed as follows: certification 25 percent, continuing education 30 percent, technical assistance 35 percent, and support to construction grants management and permitting 10 percent. The levels of technical assistance are being influenced by section 104(g)(1) funding guidance, but increased technical assistance emphasis coincides with the direction States want to take. The percentages of resource commitments to certification and continuing education training are also skewed slightly because a few States reported technical assistance and support to other programs in these categories.

All States have operator certification programs and nearly all States (44) have mandatory certification requirements. Operator certification requirements are generally similar among States, providing four classes of certification based on the size and complexity of facilities. However, nationwide, approximately 25 percent of operators are not certified and, based on 1983 data, 40 percent of operators were not certified for their levels of operations responsibility. States report a total of about 96,000 operators nationally. Of the approximately 73,000 certified operators in the States, approximately 40 percent receive continuing education annually. These continuing education courses are usually of 1 to 2 days duration; States offer 30 to 60 courses annually. States are increasingly expanding certification requirements to include continuing education and knowledge of industrial wastewater treatment processes. Some are also considering requiring testing of both wastewater treatment theory and demonstrated performance.

States also report redirection of their training programs toward achieving improved compliance. Shifts from prior emphasis on training for certification or upgrade as primary objectives are becoming apparent. These results-oriented approaches by States to program management are fully consistent with EPA and congressional objectives.

C. Funding

States report total FY 1984 operator training budgets of approximately $10.2 million. About 19 percent or $2 million was from local sources, 38 percent or $3.8 million from State sources, and 43 percent or $4.3 million from Federal funds.

Total annual State training budgets range from $25,000 to over $900,000, average about $200,000, and are generally in the range of $100,000 to $400,000. The majority of funds in State budgets are composed of State appropriations and Federal grants under Clean Water Act sections 106, 205(g) and 104(g)(1). Although State budgets often have some local-funding component, usually tuition and fees, the local portion generally does not represent a significant part of most individual State budgets. A total of 34 States received less than 25 percent of funds and 43 States received less than 50 percent of funds from local sources in 1984. However, five States received all or the majority of funds from local sources. These include Ohio, North Carolina, Pennsylvania, Florida, and Oklahoma. Although not reflected above, support from local funds generally appears to be most significant in western States.

Only 7 States have no direct State appropriations and 7 additional States obtain less than 20 percent of funds from other sources. Only 9 States report more than 50 percent of budget from State funds. The percentage of State funding to total annual funding ranges up to 71 percent in 2 States with an average of slightly over 29 percent. A total of 23 States receive less than 50 percent of funds from Federal sources. Of the remaining States, only 12 States obtain more than 75 percent of budgets from Federal funds. Federal funding is obtained primarily from State agency allocations of section 106 State program grants or State targeting of available section 205(g) construction management grants. Section 104(g)(1) add-on funds have represented a significant additional funding source since early FY 1983 in many States.

There is a wide range of State training investment on a per-operator basis. Annual spending per operator ranges from about $15 to over $550, with an average of about $160 per operator. Overall, States with relatively few operators, States with a technical assistance emphasis, and States with larger annual budgets tend to spend more per operator than other States.

The agency believes the available funding information underestimates total State contributions to operator training programs. The operator-training-related activities by State construction grants management, operations and maintenance, and compliance and enforcement personnel are generally not included in these budget figures. Based on overall data, the agency believes that the support provided by these programs may represent a significant additional contribution to the total State training program.

State self-sufficiency, as defined by EPA, is the ability to maintain an effective operator training program using only local tuition and fees and State appropriated funds as necessary. From reviewing State program descriptions, it is clear that only a few States approach a comprehensive, integrated, and self-sufficient training program. However, a number of States also appear to be moving toward improved overall programs, to increasing State funding, and to developing cost-based local tuition and fee systems for self-sufficiency.

The agency continues to support the objective of full State/local self-sufficiency. The agency also recognizes that Federal funding should continue to support the development of overall effective, integrated municipal compliance programs, including operator training and technical assistance, until States can achieve and maintain self-sufficiency. In 1984, Federal funds supporting State municipal and industrial permitting and compliance totaled approximately $32 million. Federal funds for operator training and technical assistance totaled approximately $4.3 million from both sections 106 and 104(g)(1) add-on funds.

D. Staffing

Many States rely heavily on part-time trainers, both salaried and volunteer. A total of 75 percent of the 786 staff reported were part-time. This is particularly true in large States such as New York, Pennsylvania, Illinois and Minnesota that have a total of over 300 part-time trainers. States average about 4 full-time trainers, with a range of zero to 19. In most States these trainers have a significant number of years of experience. Qualifications of staff include professional engineering, training/vocational education, and facility operations, obtained both academically and on-the-job. The part-time trainers are generally responsible for short-course continuing education and onsite technical assistance. The full-time trainers are primarily responsible for training-center administration, materials development, certification testing, and entry-level training through the State departments of education or health.

V. CONCLUSIONS

Since submission of EPA's Preliminary Report to Congress in March 1984, the agency has obtained and evaluated updated status and accomplishment data from States and has worked with a work group to formulate the conclusions and recommendations contained in this report. The conclusions and action plans that follow reflect their views as well as EPA's. The following information describes A) the appropriate roles and responsibilities of each level of government and the private sector for operator training and improved compliance; B) the elements of model State operator training and compliance programs that support these roles and responsibilities; and C) proposed multiyear action plans for activities at each level of government and by the private sector for improved operator training, effective operations and maintenance, and permit compliance.

A. Federal, State, Local and Private Sector Roles and Responsibilities

Stated as goals and objectives, the following outlines complementary Federal, State, local and private sector roles and responsibilities for achieving improved municipal facilities compliance. The definition of roles and responsibilities is provided as a basis for developing a model State operator training program and for defining Federal, State, local, and private-sector action plans to achieve improved overall municipal facilities compliance. Because improved operator training programs are only one element in achieving the overall objective, these roles and responsibilities relate to other needs at each level of government.

1. Federal

a. Goal

To achieve improved water quality through implementation of effective Statewide programs that provide for coordinated operator training, operations and maintenance management, and enforcement.

b. Objectives

o To provide Federal oversight to implementation of the National Municipal Policy and State-local efforts to ensure coordinated, compliance-oriented programs.

o To promote development of State self-sufficiency to maintain effective operator training programs through State-local fee systems and State appropriated funds approaches (and financial assistance under sections 205(g) and 106 of the Clean Water Act).

o To increase local awareness of statutory requirements through construction grants, permitting, and operator training activities, and the cost-effectiveness of operator training and improved operations and maintenance.

o To promote maintenance of local financial management and user-charge systems that recover current costs of operations, maintenance, routine equipment replacement, operator training, and facility expansion needs.

o To provide technical and program management assistance and information to local officials, facility operators, and private sector consultants and trainers to ensure use of appropriate, cost-effective technologies and improved operating facilities compliance.

o To support use of section 109(b) or State funds to construct State training centers that provide an institutional focus in the State, comprehensive operator training, and onsite technical assistance.

o To support use by States of sections 205(g) and 106 funds to assist their transition to full State self-sufficiency.

o To promote communication among States, municipalities, professional associations, interest groups, and the private sector to create public awareness of the importance of operator training, to share ideas, and develop coordinated approaches for improved municipal facilities compliance.

o To promote operator professional status, certification, training, and local salary structures that attract and retain qualified personnel.

2. State

a. Goal

To ensure municipal facilities compliance through comprehensive, coordinated, and self-sufficient operator training programs; operations and maintenance programs; technical and financial management assistance programs; and enforcement programs.

b. Objectives

o To develop strategies to bring noncomplying facilities into compliance using training in conjunction with other State activities and local communities to achieve National Municipal Policy requirements.

o To provide Statewide policies, guidance, and standards for local governments on operations and maintenance, user charges, and operator training and certification.

o To monitor municipal facilities compliance and to respond to evidence of noncompliance in accordance with the National Municipal Policy with appropriate technical assistance, training, and compliance actions.

o To identify and implement appropriate self-financing mechanisms, including user-fee systems and appropriated State funds, in order to maintain adequate local utility management and effective Statewide operations and maintenance oversight, operator training, and technical assistance programs.

o To establish and implement an institutional focus in the State for training and Statewide compliance-oriented programs that provide for certification and inservice training and onsite techical assistance.

3. Local

a. Goal

To construct, operate, and maintain publicly owned wastewater treatment facilities that comply with design and effluent requirements and that become self-sustaining utilities.

b. Objectives

o To prepare necessary compliance and correction plans to ensure that the municipality can achieve and maintain compliance.

o To ensure that proposed wastewater treatment facilities are within the community's financial management capability, can meet effluent requirements, and are operated and maintained effectively.

o To ensure that financial management and user charge systems are established and maintained that identify and recover the costs of operations, maintenance, routine equipment replacement, operator training, and expansion needs.

o To ensure that facilities are staffed by operators trained to operate and maintain the facilities in compliance with requirements and that salary structures and the working environment attract and retain qualified and certified operators.

o To administer and enforce pretreatment requirements.

4. Private Sector

a. Goal

To maintain a competent work force, available as needed, to provide operations and maintenance assistance to facility owners and State and Federal agencies on a contract basis.

b. Objectives

o To develop diagnostic services and procedures aimed at identifying the factors at a facility that are preventing compliance with discharge requirements

o To develop and maintain training delivery capabilities that are performance based and geared to facility- and operator-specific training needs

o To provide operations, maintenance, and management services by maintaining personnel who can, for a period of time, assume direct operational control of a wastewater treatment facility to restructure operations and maintenance procedures and change behavior through demonstrated performance

o To actively participate in local, State, and Federal operator training and technical assistance programs that support the continuing upgrading and professional status of operators.

B. Model State Operator Training Program

The following describe the overall functional and process elements of a model State operator training program. An effective program is one that implements defined State roles and responsibilities for operator training, improved local operations and maintenance and permit compliance. The definition of these elements are the result of intensive analysis by NETA and review by a task force composed of State, local, and EPA representatives.

A model compliance-oriented State program includes:

1. Integrated Compliance Program

Operator training and technical assistance should be integrated into the State's overall water pollution control program. A coordinated, and ultimately fully integrated, system should be established to provide formal communication and organizational links between training and technical assistance programs with operations and maintenance, compliance and enforcement, and construction grants programs in the State. In addition, the use of private sector support, including consultants and State operator associations, as well as peer matching, local cooperative arrangements, and self-help systems should be encouraged and assisted. An integrated system should ensure coordinated, timely, and most appropriate responses to noncompliance, create incentives for compliance and improved facility management, provide the means to help resolve training-related plant performance problems, and provide mechanisms for annual evaluation of results.

A formal coordination committee, composed of representatives of all appropriate State agencies, should meet quarterly to identify plant performance problems throughout the State to assign responsibility for training, technical assistance or informal/formal compliance action based on diagnosis of the problems and ensure continuous followup and feedback on results. One lead agency should be identified by the State to coordinate and manage the overall effort. In the long term, the State regulatory agency appears to be the most appropriate organization to manage these functions.

The State program should also ensure operability and maintainability reviews of proposed plant designs and specifications; use of startup services; review of O&M manuals and development of useful manuals; use of diagnostic evaluations; and support to Composite Correction Plan (CCP) and Municipal Compliance Plan (MCP) development and implementation under the National Municipal Policy.

2. Assessment of Training and Technical Assistance Needs

Training and technical assistance needs assessment should be a continuous process. However, the State agency should formally assess needs at least annually, with quarterly updates that coincide with review of compliance reports. The needs assessment should be based on feedback from the formal interprogram coordination process above as well as on deficiencies identified in problem diagnostic and compliance inspections. Ongoing training needs, including entry level and inservice training needs, should also be part of the needs assessment. The needs assessment should be based on diagnostic evaluations of compliance problems and determination of the types, quantity, and procedures for technical assistance and training needed by each community and operator.

3. Action Plan

An annual action plan should be developed linked to the needs assessment as well as feedback from the trainers and trainees. At a minimum, the action plan should identify and set priorities for who will be trained, what training and technical assistance will be provided, who will provide it, how it will be provided, and the source(s) of funding. The action plan should serve as a primary basis for developing and justifying annual budgets.

4. Training Delivery System

A delivery system should be developed and coordinated among State, local, and private sector training entities. The system should reflect all aspects of training delivery, including conventional and on site instruction, curricula, instructor qualifications, delivery methods, technical content, and training materials. States need to manage and coordinate training delivered directly through State training centers and other State agencies and by the private sector to ensure that programs meet identified needs and are oriented to assuring compliance. The training program and delivery system should ensure a balanced mix of entry level and inservice training and technical assistance.

The State should establish quality control criteria for courses, and training and technical assistance materials; provide training materials based on "need to know" criteria; periodically evaluate courses, materials and instructors; and maintain and disseminate a list of approved courses and materials.

The delivery system should encourage development of local peer matching, cooperative arrangements and other self help systems and use of nontraditional methods, such as mobile training facilities, hotlines, circuit riders, minicomputers and other remote audiovisual delivery.

State training centers exist in 28 States, the majority of which were established under section 109(b) of the Clean Water Act. Several additional States are also considering or in the process of establishing centers. These centers can serve as an institutional training focus for the State, as well as a primary source of training delivery. However, State training centers, typically located in State education departments, must support identified Statewide needs, priorities and policies; operate in close coordination with State regulatory agencies; provide a Statewide delivery capability; and maintain an outreach program particularly for small community assistance.

5. Mandatory Operator Certification

Most States (44) now have mandatory certification programs. These programs, however, usually do not measure operator competency to operate and maintain the specific facilities in the community, require annual inservice training to maintain certification, or assure that operators are certified for their levels of responsibility in the plant. An effective mandatory certification program should provide that operators demonstrate in-plant competency, be certified for operation of the appropriate treatment process, and obtain inservice training and recertification as appropriate.

6. Management Information System

A management information system should be maintained to support integrated compliance efforts, training needs assessment, training and technical assistance delivery priorities and approaches, documentation of results, and program evaluation. The system should document the compliance results of training and technical assistance for feedback to compliance response decision-making; maintain records of operator certification status, training obtained and needed; be used to notify communities of requirements; and maintain a list of approved courses.

7. State Staff Training

To provide effective operator training and technical assistance, State training staff need to maintain and upgrade their own technical and training skills. States should ensure that funds are provided for train-the-trainer workshops and conferences, professional development, and purchase of materials. Recognizing that training is also provided in most States by personnel in regulatory and construction grants programs, training also should be provided to these State personnel in training approaches and in identifying plant performance problems that can be solved through training or technical assistance.

8. Public Education

Achieving improved plant performance and compliance depends heavily on how well State and local decisionmakers and the general public understand and support the importance of effective wastewater treatment, the level of public capital and operations and maintenance investment in the plant, local compliance responsibilities under the National Municipal Policy and the Clean Water Act, and the need for operator training. The State should maintain an ongoing education effort targeted at local officals and the general public to promote improved understanding and political and financial support.

9. Adequate Long-term Fiscal Support

Long-term funding mechanisms must be established and maintained to support effective training and assistance programs. The funding mechanisms should emphasize achievement of self-sufficiency through local user fees and dedicated State funds. Federal funds, under sections 106, 205(g), and potentially 104(g)(1) of the Clean Water Act, should be used to develop effective programs and, to the extent necessary, to maintain effective programs until programmatic and fiscal self-sufficiency is achieved.

The costs of implementing an effective program will vary significantly among States depending on their current programs and current mix of local, State, and Federal funds. Appendix D documents the range of types and levels of programs among the States. A few States are presently very close to implementing the full range of elements and achieving self-sufficiency. Other States have reasonably effective programs that would require relatively little additional program development, State and local investment, and time to meet objectives. There are also a number of States with very limited programs and budgets that will require major program, statutory, and staffing adjustments and an extended period of time to do so.

The agency has provided funds to NETA to develop and test a workload and costing methodology, based on these elements of quality training, to help States and EPA develop estimates of implementation costs. The draft model and pricing methodology is presently being tested and evaluated in a number of States and only preliminary data are available. The data from 11 States show incremental costs ranging from less than $10,000 to more than $450,000 on an annual basis. The incremental costs vary significantly because of the current status of the State program and the number and size of facilities in the State. The total cost of a model training program in these selected States ranges from $950,000 in a very large industrial State to $165,000 in a rural western State. The average incremental cost of the model program in these 11 States would be approximately $200,000 annually. The national annual cost of the model State program, based on the average of this small sample, would be about twice the total 1984 cost of the current programs in the States.

C. Action Plan

Following submission of the Preliminary Report to Congress in March 1984, EPA convened a working group of State, local, and other appropriate officials to define realistic short-term and long-term policies, programs, and activities, consistent with agreed on Federal, State, and local roles and responsibilities for ensuring improved municipal compliance. Although this plan has been coordinated within the Agency and with representatives of State and local interest groups, and reflects broad agreement on the framework and many individual elements, the plan does not represent a commitment by States or local governments to implement all needed actions in the near future. Given resource and other constraints to some of the actions, the wide range of existing programs at State and local levels, and the number of governmental entities involved, the agency believes that identified State and local actions will likely be implemented over an extended period of time.

Meeting overall municipal compliance objectives, including effective plant operations, maintenance, management, operator training and technical assistance requires a comprehensive management approach to the problem at all levels of government. Improving operator training and technical assistance programs is an integral part of the needed strategy, but these programs can address only those municipal compliance problems that can be resolved through improved operations and maintenance. Effective programs must also rely on enforcement and overall operations and maintenance incentives. Programs must also recognize that significant design, construction, and laboratory capability problems also exist that cannot be resolved through training, and may not be solved through enforcement.

The EPA, State, local and private sector action plans that follow are built on the above assumptions. The plans first define a number of overall management actions that are needed to coordinate with and reinforce training and techical assistance program efforts. The action plans then identify operator training-specific actions that should be implemented at each level of government. The actions listed do not assume any prerequisite actions by EPA or States.

1. Current EPA Actions

EPA has a number of activities underway to improve municipal treatment facilities compliance and that support operator training needs. In addition to working closely with various national organizations, EPA is managing the congressional add-on section 104(g)(1) funds to meet congressional directives and agency compliance improvement objectives. The agency and States are implementing the requirements and intent of the National Municipal Policy. The agency is already beginning to implement several of the actions called for in the following section including establishment of awards programs, issuing new program coordination policies and guidance, developing new information materials, working with interest groups and professional associations, and targeting available funds and staff resources to improved operations and maintenance. The agency is also now considering other compliance and funding initiatives. The agency is also incorporating operations and maintenance incentives into a study it has conducted on future Federal funding approaches to wastewater treatment facility construction.

Computer diagnostic modeling programs are being enhanced to improve front-end identification of design and operations and maintenance problems and to target operator training and technical assistance. A complementary financial/organization management diagnostic model has also been developed to help communities identify issues in these areas that affect plant performance.

A national training conference was conducted in May 1984. The conference was directed primarily to State and EPA training officials responsible for administering grant-funded programs to exchange information on training needs, technical assistance approaches, training delivery issues, and accomplishments to date. A second national conference is being scheduled for June, 1985.

The agency is also issuing local financial management guidance and assistance materials to help ensure improved facility performance through first-year grantee performance certifications. Revised construction grants program management, delegation management, secondary treatment regulations, and a financial management capability policy also have been issued.

2. Additional EPA Actions

a. Overall EPA Management Actions

o Issue agency policy requiring enforcement of O&M requirements in permits.

o Maintain internal EPA coordination to ensure consistent interpretation and implementation of National Municipal Policy. Ensure operator training and technical assistance are included as integral components of Composite Correction Plan (CCP) development and implementation.

o Promote improved coordination and organizational integration of State enforcement, O&M, training, technical assistance, and construction grants programs through policy, guidance, and grants management.

o Require annual or biannual independent audit of local financial management systems and update of user charge systems by noncomplying communities to ensure funding of effective operations and maintenance, including operator training.

o Require that States include adequate startup services and process management laboratory equipment funding in all new facility grants.

o Maintain adequate EPA staffing to provide needed State/local O&M/operator training programs assistance and coordinated, results-oriented State oversight.

o Develop and disseminate information materials to States, grantees, and communities not expected to receive Federal funds on cost-effectiveness of good operations, maintenance and management; low cost treatment technologies; and treatment cost-reduction approaches.

o Establish EPA awards programs and promote establishment of State and local operator awards programs to recognize and encourage effective plant operations and maintenance. Disseminate information on State O&M subsidy programs.

o Request legislative changes to incorporate significantly weighted O&M element in State construction grants priority systems criteria.

o Establish high priority for use of State grant funds to develop and implement improved operations and maintenance, operator training and technical assistance programs that support overall municipal compliance priorities.

b. Operator Training - Specific Actions

o Issue O&M and operator training policy and guidance coordinated with permits and enforcement policy to encourage development of coordinated Regional and State programs and implementation of compliance-oriented operator training.

o Expand work with interest groups, professional associations, other organizations, and other Federal agencies providing wastewater treatment funding to develop increased awareness and support to compliance-oriented training and technical assistance. Consult with representative State and local officials on the development of consistent, coordinated O&M, training, and technical assistance policy and guidance.

o Compile and disseminate information for States and local governments on the compliance improvements obtained as a result of training and technical assistance and on feasible approaches to establishing effective, self-sufficient facility O&M and operator training programs.

o Target Clean Water Act sections 106, 205(g), and 104(g)(1) add-on funds to development of effective, self-sufficient State training programs that support overall municipal compliance objectives. Condition grants as necessary to ensure priority implementation.

o Identify levels and duration of needed Federal funding to support development and implementation of operator training and technical assistance components of State municipal compliance programs.

o Promote use of 205(g) and 109(b) funding authority for development of improved State outreach training capabilty.

o Provide treatment facility diagnostic modeling capability to States to assist in identifying compliance and operations management problems and related training needs.

o Develop and disseminate criteria and costing approaches for establishing effective State and local training programs and assist State implementation.

o Promote increased private sector involvement in training through the Water Pollution Control Federation, other professional associations, and the EPA Management Advisory Group.

c. EPA Implementation Requirements

The agency is already implementing several of these actions and is now considering early action on a number of others. With only a few exceptions, EPA can implement these needed actions within existing statutory authority. There are some resource constraints to implementing all of these recommendations in the very near term, but the agency is generally supportive of early action to improve operations and maintenance and operator training in conjunction with other municipal compliance efforts.

2. State Actions

EPA has been working with representatives of NETA, ASIWPCA, the National Association of Towns and Townships (NATaT), and selected other officials to define the critical, common elements of effective State operator-training programs, and the costs of implementing effective programs.

The following functions and activities comprise the agreed elements of a fully effective State operator training program, including compliance and operations and maintenance program relationships, and represent a recommended action plan for State program development.

a. Overall State Management Actions

o Establish and maintain formal interagency coordination and organizational integration mechanisms among State O&M and operator training programs with enforcement/permits and construction grants programs.

o Issue coordinated Statewide policies and local guidance using all program authorities, including training and technical assistance programs in addition to enforcement under the National Municipal Policy, to bring communities into compliance quickly and effectively.

o Require, where lacking, minimum analytical laboratory equipment in all facilities and train operators in treatment process control management. Ensure adequate laboratory capability exists onsite or through certified contract labs for effective NPDES permit effluent monitoring and reporting.

o Provide communities with financial management and user charge guidance and assistance prior to facility construction.

o Require communities to establish sound financial management systems to monitor and to recover current costs of operations, management, equipment and facility repair and replacement, training, and construction.

o Implement information programs to increase awareness of local officials and operators of statutory requirements and cost-effectiveness of O&M and training.

o Conduct operability and maintainability reviews of proposed construction designs and specifications to prevent O&M compliance problems.

o Encourage local review of operator salary structures and working environment to ensure communities can attract and retain qualified personnel.

b. State Operator Training-Specific Actions

o Assess needs annually. Develop results-oriented State training, O&M, and compliance strategy and action plan that assigns roles, responsibilities, priorities, and resources annually and provides the basis for coordinating needed technical assistance, training, and enforcement.

o Reorient and expand State training programs, including training centers, to a compliance-results orientation.

o Establish onsite training and technical assistance programs for small noncomplying communities' management officials and operators using Federal, State, local, and private sector resources; help local governments develop network arrangements among sources of assistance.

o Maintain effective conventional classroom training programs.

o Implement and and enforce mandatory competency-based operator certification and upgrade training programs. Evaluate training materials and recommend the most useful to communities.

o Conduct computerized and onsite facility diagnostic evaluations to identify training-related problems, design and construction problems not susceptible to a training/technical assistance solution, and enforcement needs.

o Incorporate and enforce O&M and training requirements in permits and construction grants.

o Use Federal 106, 205(g), 104(g)(1), and 109(b) funds as appropriate to develop and implement effective State O&M, training, and technical assistance programs.

o Examine and implement appropriate State-local funding mechanisms to achieve programmatic and fiscal self-sufficiency and earmark funds to meet identified operator training and technical assistance needs.

o Promote expanded private sector (i.e., consultants, operators, nonprofit and volunteer) O&M and training role, especially in small communities, through contracted O&M and laboratory support, circuit-rider training, peer match or contract technical assistance, computer modeling, and audiovisual approaches.

c. State Implementation Requirements

Because State programs are at different stages of development and operate under different constraints, every State will not need to, or choose to, make significant early changes to current programs. The agency has provided funding to ASIWPCA and NETA to evaluate the current status of State training programs. EPA has also provided funding to NETA to compare current State programs with the elements of the model program and to work with at least half of the States during the next two years to assist them directly in developing an action plan to implement needed changes. The remaining States will be provided information from the States assisted directly on approaches for achieving more effective programs. Implementation of effective, compliance-oriented programs in half of the States can probably be accomplished within five years. Although EPA and ASIWPCA intend to encourage early needed action in all States, given the status of current operator training programs in other States, implementation in all States will probably require at least ten years.

3. Local Government Actions

Local governments have the primary responsibility to achieve and maintain compliance through effective operations and maintenance, financial management, and operator training. Data tend to show that the majority of noncompliance is now in small communities with facilities discharging less than 1 million gallons per day. These small communities tend to have more training needs, more financial problems, and consequently more operations and maintenance problems. They also generally have received low priority for enforcement and little technical assistance. The action items that follow emphasize the need for increased awareness by local officials of their responsibilities for wastewater utility management, the need to maintain effective local operations and maintenance management systems to keep the plant in compliance, and the need to attract, retain, and train operators.

a. Local Government Management Actions

o Implement a comprehensive (i.e., preventive and corrective) maintenance management program, including, for example, scheduling, accountability, safety, parts. Establish a preventive maintenance budget to maximize facility life.

o Develop and maintain an effective treatment process management control system and procedures to monitor treatment operations and to respond to influent, treatment process, and effluent problems.

o Ensure the community's financial management capability for a proposed facility. Maintain financial management systems to identify and recover costs of operations, maintenance, management, equipment and facility repair and replacement, and needed operator training. Update user charge systems as needed to fully recover costs.

o Maintain essential inhouse laboratory capability for process management; maintain or secure certified analytical laboratory capability for permit reporting. Submit accurate and timely discharge monitoring reports to delegated States or EPA.

o Request that proposed construction plans and specifications be reviewed by State personnel and local operators for operability and maintainability.

o Develop awareness of importance of management of facilities to the community and basic understanding of wastewater treatment technologies to promote selection of most affordable, appropriate facility.

o Ensure the community establishes operator salaries and training opportunities that attract and retain qualified operators.

b. Operator Training-Specific Actions

o Ensure facilities are staffed by adequate numbers of operators and supervisors.

o Ensure operators and supervisors are trained to operate facility in compliance with permits, certified at appropriate level, and obtain continuing education annually.

o Obtain private sector, peer, or State technical assistance to solve operator-related compliance problems.

c. Local Government Implementation Requirements

The time frame for achieving effective operations and maintenance management and compliance by local government will vary significantly, depending on the appropriateness of the current facility's design, the understanding by local government officials of their compliance responsibilities and methods to maintain compliance, and competent management of the facility by the community and plant personnel. Facilities that are out of compliance because of minor operational or financial problems can probably generally achieve compliance by the statutory deadline. Communities with major design or construction problems, major management problems, or that need significant new construction will require significant additional time.

4. Private Sector

The private sector has always had a significant role in publicly owned facilities construction, operations and maintenance, and, to a lesser extent, operator training. This role is increasing and the private sector should continue to represent a major element in a coordinated overall effort. Smaller communities have not been a significant user of private sector training and technical assistance services, principally because of costs and geography. Nevertheless, the need is apparent and, through innovative approaches, there are additional opportunities for private-sector training. The private sector could:

o Develop independent or State-sponsored multicommunity service arrangements, including "circuit-rider" approaches to on site training and technical assistance.

o Develop and market teleconferencing, "hot-lines", and microcomputer software programs for plant process control, effluent control, and financial management. Develop videotape and self-teaching materials for operator continuing education for inplant or home use.

o Develop wastewater treatment management information materials and education programs for local elected and appointed officials as well as operators.

o Develop information materials and analytical models for municipal officials to use in evaluating the operational costs and effectiveness of their facilities.

The agency believes that the information and proposals contained in this final report establish an effective foundation for State and local action and fully meet congressional directives to EPA. Following submittal of this Report to Congress, the Report will be transmitted to each State, various interest groups, and professional associations with strong recommendations for early action to begin to implement these recommendations. The agency is committed to meeting its responsibilities with States to assure overall municipal facilities compliance and to provide policy, guidance, oversight, and management assistance for development of the compliance-oriented, self-sufficient State and local operator training and operations and maintenance programs.

THE END

WASTEWATER TREATMENT PLANT OPERATOR STATE TRAINING CENTERS

Location	Name	Contact	Phone
	Region I		
New England Regional Wastewater Institute South Portland, Maine NERWI Southern Maine Technical College 2 Fort Road Portland, Maine 04106	New England Regional Wastewater Institute	Kirk Laflin	(207) 799-7303
New Hampshire, Concord Water Supply & Pollution Control Commission P.O. Box 95 Concord, NH 03301	Franklin Regional Treatment Center	Robert Livingston (Concord) (Franklin)	(603) 271-3503 934-6463
Massachusetts, Boston Department of Env. Quality One Winter Street Boston, MA 02109	Upper Blackstone District Worcester, MA	Marc Perry	(617) 292-5698
Connecticut, Hartford D.E.P. State Office Building Hartford, CT 06106	Connecticut Wastewater Technology State Training Center Bethany, CT	Roy Fredricksen	(203) 393-2705
	Region II		
New Jersey, New Brunswick Wastewater Treatment Plant Dept. of Environmental Science, Cook College Rutgers University New Brunswick, NJ	New Jersey State Training Center	Vince Gregorio	(201) 932-9185
	Region III		
Maryland, La Plata Maryland State Training Center, Charles County Community College Box 910 Mitchell Rd. La Plata, MD 20646	Maryland State Training Center	Jake Bair	(301) 934-2251 ext. 431
Virginia, Richmond J. Sargent Reynolds Community College 1651 Parham Road Richmond, VA 25305	Operator Training Center	Jack Vanderland	(804) 257-6436

Location	Name	Contact	Phone
West Virginia, Charleston Department of Education 1900 Washington St. E. Charleston, WVA 25305	Operator Training Center (Under Construction) Cedar Lakes	Adam Sponaugle	(304) 348-3075
Washington, D.C. Dept. of Environmental Science Bur. of Wastewater Treatment 5000 Overlook Avenue, S.W. Washington, D.C. 20032	Department of Environmental Services	Charles R. Martin	(202) 727-5757
	Region IV		
Tennessee, Murfreesboro Rte 11 Box 388 Blanton Drive Murfreesboro, TN 37130	Murfreesboro State Training Center	Jack Hughes	(615) 890-7008
Georgia, Carrollton Georgia Water and Wastewater Institute P.O. Box 1476 Carrollton, GA 30117	Georgia Water and Wastewater Institute	Jim Bennett	(404) 834-1468
Florida, Gainesville The U. of Florida TREEO Center 3900 S.W. 63 rd Blvd. Gainesville, FL 32608	TREEO Center	Dr. Barbara Mitchell	(904) 392-2464
South Carolina, Sumter Sumter Area Technical College 506 N. Guignard Drive Sumter, SC 29150	South Carolina Water Quality Institute	Dr. William Engle	(803) 778-1961
	Region V		
Ohio, Columbus State Training Operator Training Committee of Ohio Inc. 3972 Indianola Avenue Columbus, OH 43214	Ohio State Training Center	Richard F. Melick	(614) 846-2812
Illinois, Edwardsville Environmental Resources Training Center Southern Illinois U. P.O. Box 75 Edwardsville, IL 62026	Environmental Resources Training	Tom Wooters	(217) 692-2030

Location	Name	Contact	Phone
	Region VI		
Arkansas, Camden Southern Arkansas University Technical Branch P.O. Box 3048 East Camden, AK 71701	Southern Arkansas Environmental Academy	Richard VanPelt	(501) 574-4550
New Mexico, LasCruces Dona Ana County Occupational Education Branch, New Mexico State University P.O. Box 3 DA LasCruces, NM 88003	Water Utilities Technology Program	Eugene E. Nelms	(505) 646-2730
Oklahoma, Midwest City Rose State College 6420 Southeast 15th Street Midwest City, OK 73110	Water Utilities Training Center	Dr. William Roach	(405) 733-7364
	Region VII		
Iowa, Cedar Rapids Wastewater Treatment Plant Operator Training Center Kirkwood Community College P.O. Box 2068 Cedar Rapids, IA 52406	Waste & Wastewater Technology Center	Doug Feil	(319) 393-5677
Kansas, Topeka State Technical Training Kansas State Department of Health and Environment Topeka, KS 66620	Fort Scott Community Coll. Salina Community College Dodge City Community Coll.	Karl Mueldener	(913) 862-9360
Missouri, Neosho Missouri Water and Wastewater Operator Training Facility Crowder Community College Neosho, MO 64850	Missouri Operator Training Center	Richard Thexton	(417) 451-3583
	Region VIII		
Colorado, Denver Community College of Denver Red Rock Campus 1600 Downing Street Denver, CO 80218	Colorado Wastewater Operator Training Center	Tom Feeley	(303) 988-6160 ext. 334

Location	Name	Contact	Phone
Utah, Provo Utah Technical College 1395 N. 150 East P.O. Box 1609 Provo, UT 84603	Wastewater Operator Training Facility	Debra Horton	(801) 226-5000
Wyoming, Casper Casper College 125 College Drive Casper, WY 82601	Casper College State Wastewater Training Center	Gale Zimmerman Bill Mixer	(307) 268-2542 268-2670
	Region IX		
California, San Marcos California State CSWRCB Water Quality Institute 810 W. Vallecitos Street Suite A San Marcos, CA 92069	CSWRCB Water Quality Quality Institute	Michael Popichak	(619) 744-4150
Government of Guam P.O. Box 23609 Agana, Guam	Guam Community College	Stan Malkin	(617) 734-4311
Commonwealth of the Marianas, SAIPAN Trust Territory of the Pacific Islands SAIPAN, CM 96950	Office of Planning and Statistics	Charles D. Jordan	SAIPAN 9333
Arizona, Tucson Pima County Comm. College 8202 East Poinciana Drive Tucson, AZ 85730	Arizona Wastewater Operator Training Center	David Landsburg	(602) 886-3812
	Region X		
Washington, Auburn Washington State Water/ Wastewater Training Center Green River Community College 12401 SE 320th Street Auburn, WA 98002	Waste Training Program	Fred Delvecchio	(206) 833-9111 ext. 369
Idaho, Boise Boise State University School of Vocational Education 2221 N.W. 8th Street Meridian, ID 83642	Wastewater Training Center	Veronica Fitz	(208) 382-3735

State Training Centers Being Considered

Puerto Rico	Montana
Alabama	Hawaii
Louisiana	Alaska
Nebraska	Oregon

ATTACHMENT B
PAGE 1 OF 20

Region I

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
Connecti-cut	Bethel	1.0	AS		X		X
	Branford	4.5	AS	X			X
	Bridgeport East	12.0	AS	X			X
	Bridgeport West	30.0	AS	X			X
	Bristol Forrestville	5.0	TF	X			X
	Bristol Main	3.5	TF	X			X
	Manchester	6.7	EA		X		X
	New Hartford	0.07	EA		X		X
	North Haven	4.6	TF		X		X
	Seymour	1.0	AS	X			X
	Stonington Borough	0.67	AS	X			X
	West Haven	12.7	AS		X		X
Maine	Brewer	3.0	AS	X			X
	Lisbon	1.5	AS		X		X
	Paris Utility District	1.85	AS		X		X
Massachu-setts	Attleboro	8.6	2Stage	X			
	Edgartown	0.35	EA	X			
	Holyoke	7.5	AS		X		
	Merrimack	0.45	OD	X			
	North Attleboro	4.6	AS	X			
	Somerset	1.6	EA	X			
New Hampshire	Ashland	1.6	AL	X			
	Concord (Penacook)	10.1	AS	X			
	Derry	0.75	AL	X			X
	Franklin	11.5	AS	X			
	Hampton	4.7	AS	X			
	Lisbon	0.37	SP	X			X
	Milford	2.15	EA	X			
	Newfields	0.12	AL		X		X
	Rollinsford	0.15	OD		X		X
	Salem	1.3	TF	X			X
	Strafford Co. Home	0.05	AL		X		X
	Sullivan Co. Home	0.05	AL		X		X
	Sunapee	0.64	OD		X		X
	Troy	0.26	AL		X		X
	West Swanzey	0.16	AL	X			
	Woodsville	0.33	EA	X			
Rhode Island	Smithfield	3.5	AS		X		X
Vermont	Chester	0.18	EA	X			X
	Lydonville	0.75	EA	X			X
	Pittsford	0.07	EA		X		X
	Richmond	0.22	EA	X			X
	West Ruthland	0.325	EA	X			X
	Woodstock	0.24	EA		X		X

Region I

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
NEIWPCC	Fort Kent	0.7	OD	X			X
	Limestone	0.162	AS	X			X
	Blue Hill	0.07	EA	X			X
	Bar Harbor	1.4	AS	X			X
	Orono	1.84	AS	X			X
	Lewiston-Auburn	14.2	AS	X			X
	Amesbury	1.9	EA	X			X
	Manchester	0.67	EA	X			X
	South Bridge	2.3	EA	X			X
	Ipswich	1.8	EA	X			X
	Erving-Millers Falls	1.0	AS	X			X
	Saxton's River	0.1	OD	X			X
	Wallingford	0.12	OD		X		X
	White Rider Jct. (Hartford)	0.97	EA		X		X
	Poultney	0.35	EA		X		X
	Brandon	0.7	OD	X			X
	Castleton	0.36	EA	X			X
	Fair Haven	0.2	OD	X			X
	Orleans	0.19	AL	X			X
	Barton	0.26	AL	X			

Region II

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
New Jersey	Aberdeen	0.8	AS	X			X
	Barrington	1.2	AS			X	X
	Bell Manor	1.8	AS			X	X
	Bryan TWP Int. SC.	0.018		X			X
	East Windsor	2.23	AS			X	X
	Florence	1.5	TF		X		X
	Gloucester-Blockwood	.625	AS			X	X
	Hamilton	6.75	TF	X			X
	Palmayra	0.5	TF			X	X
	Pennsauken	4.0	TF		X		X
New York	Brownville	0.65	AS				X
	Buchanan	0.55	AS				X
	Camden	0.80	OD				X
	Clayton	0.30	TF				X
	Cableskill	0.75	AS				X
	Deferiet	0.08	AS	X			X
	Dekalb	0.03	AS	X			X
	Delhi	0.575	TF				X
	Fulton (City)	3.30	TF				X
	Livingston Manor	0.80	AS				X
	Lloyd	1.25	RBD				X
	Potsdam	3.30	AS	X			X
	Rosendale	0.10	AS				X
	Walton	1.17	TF				X
Puerto Rico	Bayamon Covadonga	1.0	AS	X			X
	Bayamon Gardens	0.670	TS			X	X
	Bayamon-Las Teresasas	0.375	CG			X	X
	Bayamon-Royal Town	2.062	TS			X	X
	Gurabo	0.60	AS			X	X
	Hamacao	0.25	AS			X	X
	Loiza Valley Canovanas	0.513	CG			X	X
	Naranjito	0.5	AS			X	X
	Rio Grande	0.375	CS			X	X
	Truijillo Alto	0.50	CS			X	X

Region III

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
Delaware	Bridgeville	.08	TF				X
	De Seashore Park	.13					X
	Harrington	.75					X
	Laurel	.75	L				X
	Lewes	.75					X
	Milton	.25					X
	Rehoboth	.3					X
	Selbyville	.70	L				X
Maryland	Accident	.075	AS	X			
	Betterton	.2	EA	X			
	Broadneck	4.2	AS	X			
	Centreville	.375	TF	X			
	Friendville	.1	AS	X			
	Hancock	.2	L			X	X
	Millington	.07	CS	X			
	Oxford	.125	L	X			
	Princess Anne	.7	TF	X			
	Queenstown	.2	TF			X	X
	Ridgely	.2	AS		X		X
	Snow Hill	.5	RBC	X			
Pennsyl-vania	Adamstown	0.30	CS		X		
	Alexandria	0.12	CS	X			
	Clarks Summit	1.20	EA	X			
	Greenfield Township	.25	CS			X	X
	Lynn Township	0.08	EA		X	X	X
	Media Borough	1.80	TF		X		
	Milleville	0.14	CS	X			
	Mt. Pocono	0.40	CS	X			
	Saxonburg Borough	0.50	EA		X		
	Sunbury	3.50	AS				
Virginia	Colonial Beach	0.80	Packed Tower			X	X
	Kilmarnack	0.20	EA			X	X
	Mathews	0.10	CS			X	X
	Middleburg	-	RBC			X	X
	Plains Marshall	0.16	EA			X	X
	Purcellville	0.50	EA			X	X
	Reedville	0.20	EA			X	X
	South Boston	2.0	AS			X	X
	Smithfield	0.5	OD			X	X
	West Point	0.30	TF			X	X
West Virginia	Alderson	.4	AS				X
	Beverly	.34	AS				X
	Bruceton/Brandonville	.06	TF				X
	Buffalo	.75	AS				X
	Cheylan	.3	AS				X

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

Region III

*Training provided by National Demonstration Water Project (NDWP)

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
	Colfax	.08	AS				X
	Culloden	.2	AS				X
	Delbarton	.25	TF				X
	Glen Rogers	.1	AS				X
	Romnex	.4	AS				X
	Roncervete	.32	AS				X
	New Haven	.22	AS				X
	Shepherds Town	.4	AS				X
	St. Marys	.3	AS				X
	Wardensville	.11	AS				X
	Wellsburg	1.25	AS				X
	Bradlex	.4	AS				X
	Huttonsville	.25	AS				X
	JaneLew	.15	AS				X
	Arbuckle	.35	AS				X
	*Ansted			X			
	*Belington				X		
	*Belmont			X			
	*Cairo					X	X
	*Cameron					X	X
	*Davis			X			
	*Elizabeth				X		
	*Elkins			X			
	*Ellenboro-Lamberton					X	X
	*Farmington					X	X
	*Follansbee			X			
	*Glenville			X			
	*Grantsville			X			
	*Harrisville					X	X
	*Hooverson Heights			X			
	*Junior			X			
	*Malden				X		
	*Mannington					X	X
	*Middlebourne					X	X
	*Monogah					X	X
	*New Martinsville			X			
	*Rivesville					X	X
	*Rowlesburg			X			
	*Rupert			X			
	*Spencer			X			
	*Summersville				X		
	*Thomas				X		
	*Tunnelton				X		
	*Weirton			X			
	*Wellsburg			X			
	*West Hamlin			X			
	*Williamstown					X	X

Region IV

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
Florida	Belleaire	0.9	AS	X			
	Deland	8.0	EA	X			
	Ft. Walton Beach	4.5	RBC	X			
	Immokalee	5.0	OD	X			
	Kissimonee	3.0	AS			X	
	New Symrna Beach	4.0	AS	X			
	Niceville	2.0	CS	X			
	Pahokee	1.2	AS		X		
	Sebring	2.0	AS	X			
	Sneads			X			
Georgia	Andersonville		EA				X
	Baconton		EA				X
	Bowdon						
	Bremer			X			
	Buchanan			X			
	Clarksville			X			
	Cleveland			X			
	Commerce			X			
	Franklin						X
	Ft. Gaines		EA				X
	Glennville						X
	Greenboro			X			X
	Hampton						X
	Plains						X
North Carolina	Beaulaville	.26	AL		X		X
	Boonville	0.1	EA		X		X
	Dunn	2.275	EA	X			X
	Farmville	3.5	EA				X
	Hamlet	1.0	EA	X			X
	Highlands	0.246	EA	X			X
	Kenansville	0.17	OD		X		X
	Robbinsville	0.13	EA		X		X
	Robersonville	1.2	EA				X
	Swansboro	0.3	OD				X
South Carolina	Barnwell	1.0	TF		X		X
	Batesburg	1.3	EA			X	X
	Cayce	4.0	EA	X			X
	Edgefield	0.61	OD		X		X
	Johnston #1	0.66	TF		X		X
	Johnston #2	0.12	OD		X		X
	Land O Lakes	.003	CS	X			X
	Manning	1.0	AS	X			X
	N. Augusta	0.05	EA			X	X
	Newberry #1	0.500	L	X			
	Newberry #2	0.015	CS		X		X
	Prosperity, E. Lagoon	0.800	AL				
	Prosperity, W. Lagoon	0.015	AL				
	Ridgeway	0.120	EA	X			
	Wade Hampton	4.00	AS		X		X
	Willliston	.800	AL		X		X

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

Region IV
*Training provided by NDWP

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
South Carolina	*Aiken				X		
	*Batesburg			X			
	*Bennettsville					X	X
	*Berkeley					X	X
	*Cayce			X			
	*Chester-Sandy River			X			
	*Chester-Rocky Creek			X			
	*Clemson					X	X
	*Clover			X			
	*Dillon				X		
	*Florence				X		
	*Gaffney-Clary			X			
	*Gaffney-Providence Creek			X			
	*Hardeeville			X			
	*Hartsville					X	X
	*Inman Mills			X			
	*Jefferson						
	*Kershaw			X			
	*Kingstree			X			
	*Lake City			X			
	*Manning				X		
	*Marion				X		
	*McCormick			X			
	*Ninety-Six			X			
	*Ridgeland				X		
	*Riverdale Mills				X		
	*Saluda			X			
	*Summerton			X			
	*Walterboro					X	X
	*WCRSA Travelers Rest				X		
	*WCRSA Parker				X		
	*WCRSA Lakeside			X			
	*Whitmire				X		
	*Winnsboro			X			
Tennesee	Alexandira	.15	CS	X			X
	Bell Buckle	0.150	EA	X			
	Copper Hill	.4	OD	X			
	Decatur	.17	EA	X			
	Dyer	.675	OD	X			X
	Fayetteville	2.66	CAS	X			
	Friendship	.093	OD	X		X	X
	Huntsville	.08	CS				X
	Jellico	.4	AS	X			X
	New Bern	.4	TF		X		X
	Old Hickory	1.0	TF		X		
	Oliver Springs	1.0	CS	X		X	X
	Rockwood	1.65	TF				
	Rutledge	.16	EA	X			X
	Sharon (enforcement act)	.15	EA		X		X
	Signal Mountain	.4	AS	X		X	X
	*Caryville-Jacksboro						
	*Crossville			X			

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

Region IV
Training provided by NDWP

Tennessee	*Dayton			X			
	*Forks of the River			X			
	*#2 Knox Utility District			X			
	*Oliver Springs						
	*Oneida				X		X
	*Pikeville			X			
	*Sevierville			X			
	*Spring City			X			
	*Sweetwater				X		X
	*Tellico Plains					X	X
	*Wartburg				X		X
	*Whitwell			X			
Kentucky	*Albany				X		
	*Beattyville					X	X
	*Benham					X	X
	*Bledsoe				X		
	*Caney Creek				X		
	*David			X			
	*Elkhorn City			X			
	*Evarts			X			
	*Fleming-Neon			X			
	*Harlan			X			
	*Hazard					X	X
	*Hindman				X		X
	*Hyden				X		
	*Jackson				X		
	*Livingston			X			
	*London			X			
	*Loyall					X	X
	*Martin			X			
	*Pikeville				X		X
	*Salyersville			X			
	*Wheelwright			X			
	*Whiteburg				X		X

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

Region IV
Training provided by NDWP

STATE	NAME OF COMMUNITY	SIZE	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
Mississ-ippi	*Batesville					X	
	*Belzoni					X	
	*Bolton				X		
	*Burnsville				X		
	*Cary			X			
	*Charleston			X			
	*Cleary Heights				X		
	*Coahoma Jr. College				X		
	*Coffeeville				X		
	*Crosby				X		
	*Delta City			X			
	*Falcon			X			
	*Forest				X		
	*Glendora				X		
	*Gloster				X	X	
	*Guntown				X		
	*Hickory				X		
	*Hollandale			X			
	*Inverness			X			
	*Lexington				X		
	*Long Beach			X			
	*Mantachie					X	
	*Marietta			X			
	*Meadville				X		
	*Mound Bayou				X		
	*Pass Christian			X			
	*Picayune			X			
	*Reinzi				X		
	*Rosedale			X			
	*Shubuta				X		
	*Smithville				X		
	*Tchula				X		
	*Union			X			
	*Waveland			X			
	*West					X	X
	*Woodville			X			

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

Region V

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
Illinois	Ashton	.21	TF	X			X
	Byron	.36	CS	X			X
	Hardin	.175	CS	X			X
	Orion	.4	CS		X		X
	Riverton	.3	AS		X		X
	Elizabeth	.01	CS				X
	White Hall	.36	CS	X			X
Indiana	Osgood	.35	EA				
	North Vernon	1.75	AS	X			
	Eaton	.3	TF	X			X
	Goshen	.5	AS	X			X
	Knox	.51	AS				X
	Lapel	.36	EA	X			X
	Middlebury	.2	TF		X		X
	Westville	.35	CS		X		X
	New Carlysle	.35	AS				X
	North Salem	.08	EA	X			
	Whitestown	.085	EA				
Michigan	Bessemer	0.55	TF			X	X
	Durand	0.8	TF	X		X	X
	Evart	.425	-			X	X
	Harbor Beach	.35	TF			X	X
	Manistee	1.32	-			X	X
	Milford	1.165	AS	X	X		X
	Newberry	.9	AS	X		X	X
	Owosso	.6	PC			X	X
	Paw Paw Lake, Coloma	3.5	TF	X			X
	Lowell	1.2	-		X		X
Minnesota	Barnum	.06	EA				X
	Brownton	.06	AS				X
	Clarissa	-	TF				X
	Comfrey	-	TF				X
	Emmons	.09	CS				X
	Grand Marais	.3	AS				X
	Le Center	.3	CS				X
	Mable	-	CS				X
	Sandstone	.3	TF				X
	Staples	.4	AS				X
Ohio	Wellesville	1.0	TF		X		X
	Carrollton	-	RBC		X		X
	Mahoning-Meader Creek	4.0	AS	X			X
	Mahoning-Boardman	-	EA		X		X
	Southpoint	-	RBC			X	X
	Gnadenhutten	-	AS		X		X
	Plesant Valley RDS	0.60	OD	X			X
	Eldorado	0.10	EA			X	X

Region V

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
Wisconsin	Hilbert	.171	AL		X		X
	Marathon City	.3	AS	X			X
	Weyerhauser	.04	SP	X			X
	Clinton	.305	TF		X		X
	Mount Horeb	.79	RBC	X			X
	Waldo	.2	AS	X			X
	Galesville	.31	TF		X		X
	Plum City	0.06	AS	X			X
	DOT Rest Stops 26, 36	.009	SP		X		X
	Iron Belt	.032	SB	X			X
	Central Wisconsin Airport	.025	EA		X		X
	Coleman						

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

Region VI
*Training provided by NDWP

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
Louisiana	Abita Springs/Lynn - Bridges	.12	OD		X		X
	Basile	.45	OD	X			X
	Blanchard	.19	OD	X			X
	East Hodge	.06	EA		X		X
	Georgetown	.6	EA	X			X
	Lake Authur	.75	TF	X			X
	Merryville	.25	OD	X			X
	Pleasant Hill	.10	OD	X			X
	*Dalhi				X		X
	*Gilbert				X		X
	*Livingston				X		X
	Loureauville					X	X
	*Madisonville			X			
	*Port Barre					X	X
	*Walker			X			
New Mexico	Ruidoso	2.6	EA	X			
	Cloudcroft	1.0	TF	X			
	Aztec	1.5	EA	X			
	Reserve	.075	EA	X			X
	James Springs	.045	EA	X			X
	Eunice	.3	TF		X		X
Arkansas	Brookland	.12	SP	X			X
	Calvin	.12	AL	X			
	Dardanelle	1.0	AS		X		X
	Greenbrier	.2	AL	X			
	Huntington	.1	OD	X			
	Madison	.3	AS		X		X
	Magazine	.15	AS	X			
	Pangburn	.1	SP		X		X
	Paris	.75	OD	X			
	Prescott	1.0	AS	X			
	Stampo	.6	AS	X			X
	Taylor	.12	AS	X			
Texas	Deavers	.08	AS				X
	Harris County FWSD# 6	.2	AS				X
	Kingsland MUD						X
	Lake LBJ MUD						X
	Orchard	.04	CS				X
	Sheperd	.165	CS				X
	W. Tawakoni	.3	EA				X
Oklahoma	Broken Bow	.30	AS	X			
	Checotah	.4	OD	X			
	Eufaula	.3	OD	X			
	Hartshorn	.25	OD	X			
	Kingston	.3	AS	X			
	Lexington	.2	AS	X			
	Stringtown	.15	AS	X			
	Yale	.2	AS	X			
	Grove	.042	EA	X			

Region VI

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
	Bristow	.4	EA	X			
	Pittsburs	.05	AS	X			X
	Ardomore	1.0	EA	X			X
	Braggs	.022	OD	X			X
	Broken Arrow	.225	EA	X			X
	Henryetta	.3	EA	X			X
	Miami	.048	EA	X			X
	Okay	.016	EA	X			
	Porter	.02	OD	X			
	Vinita	.048	OD	X			
	Wagoner	.042	EA	X			
	Locust Grove	.022	TF				X
	Beggs	.033	EA				X
	Jay	.092	EA				X
	Tecumseh	.075	EA				X
	Chooceteau	.042	TF				X
	Salina	.04	L				X
	Carney	.02	AL				X

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

Region VII

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
Missouri	Alba	.07	OD	X			
	Atlanta	.05	TF	X			
	Bolivar	.40	OD	X			
	Bourbon	.10	OD	X			X
	Buffalo	.35	OD	X			X
	Butler	.70	OD	X			
	Cassville	1.25	OD	X			
	Charleston	.6	TF	X			
	Crane	.07	TF	X			
	Cuba	.3	CS	X			
	Edina	.5	OD	X			
	Farmington	1.075	TF	X			
	Harrisonville	1.0	CS	X			
	Homestead Village	.03	EA	X			
	Kearny	.15	CS	X			X
	Licking	.64	CS	X			
	Louisiana	.75	CS	X			X
	Macon	2.1	TF	X			
	Moberly	1.6	TF	X			
	Miangya	.035	OD	X			
	Mount Vernon	1.0	TF	X			
	Newburg	.75	CS	X			X
	Noel	.50	OD	X			
	Osceola	.06	CS			X	X
	Pevley	1.5	AS			X	X
	Pineville	.075	CS			X	
	Platte City	.80	EA			X	
	Reed Springs	.03	CS	X			X
	Rhoch Port	.25	OD			X	X
	Seymour	.225	CS	X			
	Shelbina	1.25	EA	X			
	Slater	.40	OD	X			X
	St. James	.46	OD	X			
	Tipton	.435	OD	X			
	Van Buren	.40	OD	X			X
	Waverly	.12	OD	X			X
Nebraska	Brownville	.015	AS	X			
	Cambridge	.257	OD	X			
	Coleridge	.075	AS	X			
	Crawford	.150	TF	X			
	Crofton	.100	OD	X			
	Egkhorn	.28	AS	X			
	Geneva	.322	RBC	X			
	Hebron	.217	OD	X			
	Laurel	.142	OD	X			
	Murray	.05	RBC		X		X
	Pilger	.045	AS	X			
	Riverside Lakes	.060	AS	X			
	Spencer	.056	AS			X	X

Region VII

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
	Wahoo	.69	AS	X			
	West Point	.575	AS	X			
	Winser	.160	AS	X			
	Weeping Watyer	.148	AS	X			
	Wood River	.200	RBC		X		X
	Yutan	.120	RBC	X			
Iowa	Adair	.10	TF	X			
	Akron	.967	CS		X		X
	Bloomfield	1.14	TF	X			X
	Cascade	.250	RBC	X			
	Central City	.187	TF	X			
	Dayton	.090	TF		X		
	Denson	2.73	EA		X		X
	Dewitt	.520	TF		X		
	Eldora	1.0	SBR		X		X
	Grundy Center	.832	SBR		X		X
	Hills	.037	EA	X			
	Hundson	.50	EA	X			
	Janesville	.165	EA	X			
	Jefferson	1.1 1	EA			X	X
	Keystone	.07	SP		X		
	Lake Mills	.360	TF		X		X
	Logan	.20	CS	X			
	Manchester	.823	EA		X		X
	Maquoketa	2.5	RBC	X			
	Maxwell	.108	TF			X	X
	Milford	2.6	RBC	X			
	North English	.075	TF	X			
	Orange City	.2	TF		X		X
	Readlyn	.1	EA		X		X
	Red Oak	.796	TF			X	
	Rock Rapids	.384	TF			X	
	Rockwell City	.288	TF			X	
	Runnells	.070	EA	X			
	Sibley	.670	EA	X			
	Solon	.400	EA	X			
	Steamboar Rock	.049	TF		X		
	Stratford	.071	EA	X			
	Swisher	.09	EA	X			
	Vinton	1.8	EA		X		X
	Waukon	.89	TF	X			
	Webester City	2.3	RBC	X			
	West Liberty	1.37	CAS			X	
	West Union	.435	TF		X		X
	Whihemore	.147	TF		X		X
	Willamsburg	2.1	EA	X			
	Winfield	.239	TF		X		X
	Winterset	1.25	TF			X	X

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

Region VII

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
Kansas	Atchison	2.8	AS	X			
	Belleville	.461	RBC	X			X
	Bennington	.1	AS	X			
	Blue Mound	.0372	AS	X			
	Buffalo	.04	AS	X			
	Crimarron	.216	TF	X		X	X
	Colony	.490	AS		X		X
	Deerfield	0.7	AS	X			
	Douglass	.22	AL	X			
	Ellinwood	-	TF	X			
	Frontenac	-	CS			X	X
	Goodland	-	AS	X			
	Handover	.1	AS	X			
	Hiawatha	1.10	TF	X			
	Holton	.336	RBC	X			
	Hoxie	.2	TF	X			
	Iola	1.62	AL	X			
	LaHarpe	.135	AS	X			
	Larned	.65	TF	X			
	Lincoln	.37	RBC	X			
	Madison	.15	AS	X			X
	Medicine Lodge	-	TF	X			
	Mulvane	.4	RBC		X		X
	Oakley	-	TF	X			
	Osage City	.4	AS			X	X
	Prescott	.03	AS	X			
	St. George	.045	EA	X			
	Wilson	1.0	TF	X			
	Yates Center	.3	AS	X			

Region VIII

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
Colorado	Glenwood Springs		RBC	X			
	W. Glenwood Springs		AS	X			
	Rifle		Lagoon	X			
	Silt		Lagoon	X			
	Carbondale		AS	X			
	Brighton		TF			X	X
	Ft. Morgan		Lagoon			X	X
	New Castle			X			
Montana	Forsyth		SP	X			
	Kalispell	2.7	SP		X		
	Livingston	2.0	RBC	X			
	Missoula	10.0	SP	X			
North	Washburn	SD	SP		X		
Dakota	Steele	SD	SP				
	Tappen	SD	SP				
	Streeter	SD	SP				
	Linton	SD	SP				
	Hazen	SD	SP				
	Bowman	SD	SP				
	Abercrambie	SD	SP				
	Christine	SD	SP				
	Dwight	SD	SP				
	Zap	SD	SP				
	New Leipzig	SD	SP				
	Garrison	SD	SP				
	Parshall	SD	SP				
	Wilton	SD	SP				
	Dodge	SD	SP				
	Regent	SD	SP				
	Golva	SD	SP				
	Medora	SD	SP				
	Richardton	SD	SP				
	Taylor	SD			X		
	Hoople	SD	SP				
	Crystal	SD	SP				
	Edinburg	SD	SP				
	Fordville	SD	SP				
	Mountain	SD	SP				
	Glenburn	SD	SP				
	Flasher	SD	SP				
	Kulm	SD	SP				
	Crosby	SD	SP				
	Noonan	SD	SP				
	Ray	SD	SP				
	Forbes	SD	SP				
	La Moure	SD	SP				
	Williston	SD	SP				
	Portal	SD	SP				

Region VIII

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
North Dakota	Columbus	SD	SP				
	Powers Lake	SD	SP				
	Maddock	SD	SP				
	Minnewaukan	SD	SP				
	Upham	SD	SP				
	Munich	SD	SP				
	Towner	SD	SP				
	Horace	SD	SP				
	Butte	SD	SP				
	Dunn Center	SD	SP				
	Ashley	SD	SP				
	Berthold	SD	SP				
	Courtenay	SD	SP				
	Bowdon	SD	SP				
	Dazey	SD	SP				
	Alexander	SD	SP				
	Bowbells	SD	SP				
	Forbes	SD	SP				
	LaMoure	SD	SP				
	Williston Portal	SD	SP				
South Dakota	Bryant	SD	SP				X
	Chamberlain		OD				X
	Custer State Hospital						X
	Custer State Park		AS				
	Game Lodge	SD	SP				
	Sylvan Lake	SD	SP				
	Legion Lake	SD	SP				
	Blue Bell	SD	SP				
	Elkton	SD	SP				
	Ft. Pierre	SD	SP				
	Iroquois	SD	SP	X			
	Newell	SD	SP	X			
	Pierre		RBC				
	Salem	SD	SP				
Utah	Tooele	1.5	TF				
	Silina	.45	TF				
	Payson	1.25	TF				
	Cedar City	2.25	TF				
	Sandy	1.5	AS				
Wyoming	Aspen	.1	AS		X		
	South Cheyenne	.8	AS				
	Midwest	.04	AS				
	Hulett	.04	AS				
	Gillette	1.2	AS				
	Thermopolis	0.6	TF				

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

Region IX

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
California	Mammoth Co Water District	3.0	AS			X	X
	Bass Lake	.5	CS	X			
	City Bishop	.9	PT		X		X
	City of Ridgecrest	2.9	PT		X		X
	Carmelle	2.3	AS	X			
	Hilton Creek	.05	AS		X		X
	Blithe	1.4	TF	X			
Hawaii	Kailua Kena	1.0	AS	X			
	Kulaiman	0.5	AS			X	

Region X

COMPLIANCE STATUS OF INDIVIDUAL PLANTS
82/83 FUNDING

STATE	NAME OF COMMUNITY	SIZE (MGD)	TYPE	IN COMPLIANCE	IMPROVED PERFORMANCE	NO CHANGE	STILL IN TRAINING
Alaska	Eagle River	2.0	RBC		X		X
	Nenana	0.8					X
	Kalwock	0.2					X
	Mountain Village	0.1					X
	Fairbanks	4.5	AS			X	X
	Haines	.250	AS				X
Idaho	Hailey			X			X
	Ketchum						X
	Harrison		AL				X
	Grace		OD				X
	Priest River		OD				X
	Stites		L				X
	Juliaetta						X
Oregon	Pacific City		AS	X			
	Dallas		AS	X			
	Estacada				X		
	Cascade Locks		EA			X	X
	Nyssa						
Washington	Brewster		EA/OD				X
	Crystal Mountain						X
	Cusick						X
	Elma						X
	Leavenworth		EA/OD				X
	Tekoa						X
	Tulalip						X
	Vashon Sewer District						X

Type of Plant
- TF - Trickling Filter
- AS - Activated Sludge
- CS - Contact Stabilization
- CG - Clarigestor
- RBC - Rotating Biological Contactor
- SP - Stabilization Pond
- AL - Aerated Lagoon
- L - Lagoon
- PC - Physical-Chemical; Carbon Absorption
- EA - Extended Aeration
- OD - Oxidation Ditch

Size of Plant
- SD - Seasonal Discharge

STATUS OF STATE ONSITE OPERATOR TRAINING
AND TECHNICAL ASSISTANCE PROJECTS FUNDED IN FY 1982 AND FY 1983

*Training provided by NDWP

STATE	82/83 ALLOCATION	# PLANTS IN STATE UNDER 5 MGD BUILT W/FEDERAL $	# OF MECHANICAL PLANTS	# OF DIAGNOSTIC EVALUATIONS	# PROVIDED ONSITE TNG /TECHNICAL ASSISTANCE	# OF PLANTS BROUGHT IN COMPLIANCE	# SHOWING PERFORMANCE IMPROVEMENT	# PLANTS STILL IN TRAINING
Region I								
Vermont	$ 50,000	82	82	19	6	6	-	6
New Hampshire	126,000	65	65	39	16	10	6	9
Massachusetts	50,000	96	96	20	6	5	-	-
Connecticut	90,000	59	59	13	12	7	5	12
Rhode Island	50,000	20	20	8	1	-	-	1
NEIWPC	275,000	N/A	N/A	20	20	17	3	20
Maine	50,000	100	100	14	3	1	-	3
Region II								
New Jersey	125,000	46	46	20	10	3	2	10
New York	120,000	250	250	32	14	3	-	14
Puerto Rico	104,000	25	25	10	10	1	-	10
Region III								
Pennyslvania	110,000	193	193	20	10	4	4	2
Maryland	137,000	40	40	20	12	9	1	3
Delaware	33,000	40	40	15	8	-	-	8
Virginia	137,000	42	42	10	10	-	-	10
West Virginia	32,000	36	36	20	20 32*	- 16*	- 6*	10 10*
Region IV								
Florida	148,917	131	129	10	10	8	1	-
Georgia	141,260	259	179	20	14	6	-	8
Kentucky	-	-	-	-	22*	10*	8*	8*
Tennessee	101,260	201	152	21	16 14*	11 8*	3 3*	10 5*
North Carolina	60,000	232	204	25	10	3	4	10
South Carolina	75,000	196	103	30	16 34*	5 19*	7 9*	9 6*
Mississippi	38,763	304	58	10	36*	14*	17*	5*
Alabama	54,800	211	107	10	-	-	-	-

STATUS OF STATE ONSITE OPERATOR TRAINING
AND TECHNICAL ASSISTANCE PROJECTS FUNDED IN FY 1982 AND FY 1983

STATE	82/83 ALLOCATION	# PLANTS IN STATE UNDER 5 MGD BUILT W/FEDERAL $	# OF MECHANICAL PLANTS	# OF DIAGNOSTIC EVALUATIONS	# PROVIDED ONSITE TNG /TECHNICAL ASSISTANCE	# OF PLANTS BROUGHT IN COMPLIANCE	# SHOWING PERFORMANCE IMPROVEMENT	# PLANTS STILL IN TRAINING
Region V								
Illinois	$180,000	377	377	7	7	4	2	7
Indiana	63,184	232	232	15	15	5	2	10
Michigan	40,000	263	263	10	10	4	2	10
Minnesota	65,966	330	330	10	10	-	-	10
Ohio	40,000	302	302	8	8	2	4	8
Wisconsin	78,850	423	422	11	11	6	5	11
Region VI								
Arkansas	180,000	280	120	32	18	7	4	11
Louisiana	102,000	221	137	22	16 *7	6 *2	2 *4	16 *4
New Mexico	100,000	127	117	18	6	5	1	3
Oklahoma	270,000	456	252	48	42	20	-	34
Texas	140,000	782	666	37	15	15	-	15
Region VII								
Iowa	236,000	702	323	85	49	19	16	16
Kansas	222,000	707	474	50	33	25	2	7
Missouri	237,000	688	371	40	36	31	-	12
Nebraska	158,000	348	174	21	21	15	2	3
Region VIII								
Colorado	143,000	156	123	21	16	6	-	2
Montana	78,000	124	39	16	10	3	1	-
North Dakota	60,000	235	3	95	95	-	1	41
South Dakota	88,000	188	42	14	14	2	-	-
Utah	143,000	80	24	5	-	-	-	-
Wyoming	130,000	66	10	6	6	-	-	-

STATUS OF STATE ONSITE OPERATOR TRAINING
AND TECHNICAL ASSISTANCE PROJECTS FUNDED IN FY 1982 AND FY 1983

STATE	82/83 ALLOCATION	# PLANTS IN STATE UNDER 5 MGD BUILT W/FEDERAL $	# OF MECHANICAL PLANTS	# OF DIAGNOSTIC EVALUATIONS	# PROVIDED ONSITE TNG /TECHNICAL ASSISTANCE	# OF PLANTS BROUGHT IN COMPLIANCE	# SHOWING PERFORMANCE IMPROVEMENT	# PLANTS STILL IN TRAINING
Region IX								
Arizona	$ 35,000	50	25	-	-	-	-	-
California	163,000	365	360	30	7	3	3	4
Hawaii	25,000	16	16	5	2	1	-	-
Region X								
Alaska	40,000	22	20	17	6	-	1	6
Idaho	178,000	145	35	49	7	1	-	7
Oregon	132,000	188	153	48	5	2	1	1
Washington	155,000	322	302	12	8	-	-	8

STATUS OF STATE TRAINING PROGRAMS

ATTACHMENT D (Page 1)

STATE	ORGANIZATION	NUMBER OF OPERATORS	NUMBER CERTIFIED	NUMBER TRAINED ANNUALLY	STATE TRAINING ACTIVITIES (EXPRESSED AS %)					SOURCES OF REVENUE (FY 1984) EXPRESSED AS %			TOTAL 1984 BUDGET ($1000)	STAFFING	
					CERTIFICATION	UPGRADE	TECHNICAL ASSIST	CONST. GRANTS MGMT	NPDES	LOCAL	STATE	FEDERAL		FULL TIME	PART TIME
CONNECTICUT	Dept. of Environmental Protection Local Assistance and Program Coordination Section	1120	530	160	5	15	70	5	5	0	36	64	115	1	1
MAINE	Dept. of Environmental Protection	600	450	300	10	0	65	10	15	0	0	100	54.7	0	4
MASSACHUSETTS	Dept. of Environmental Quality Engineering	4500	2250	200	5	0	85	5	5	0	17	83	127	2	4
NEW HAMPSHIRE	Dept. of Environmental Protection (Separate Divisions) & 109(b)	320	300	300	5	0	60	15	20	2	43	55	216	5	1
RHODE ISLAND	Dept. of Environmental Management	440	285	120	10	0	40	10	40	0	29	71	35	0	2
VERMONT	Dept. of Water Resources Div. of Environmental Engineering	255	255	70	15	50	35	0	0	0	33	67	76	3	0
NEW JERSEY	Dept. of Environmental Protection (Separate Divisions) 109(b)	-	1300	145	22	-	78	-	-	0	22	78	160	1	2
NEW YORK	Dept. of Environmental Conservation	5600	2800	400	21	17	58	4	-	0	33	67	629	15	60
DELAWARE	Department of Natural Resources	100	85	12	40	-	60	-	-	0	45	55	55	1	0

1 of 6

STATUS OF STATE TRAINING PROGRAMS

STATE	ORGANIZATION	NUMBER OF OPERATORS	NUMBER CERTIFIED	NUMBER TRAINED ANNUALLY	STATE TRAINING ACTIVITIES (EXPRESSED AS %)					SOURCES OF REVENUE (FY 1984) EXPRESSED AS %			TOTAL 1984 BUDGET ($1000)	STAFFING	
					CERTIFICATION	UPGRADE	TECHNICAL ASSIST	CONST. GRANTS MGMT	NPDES	LOCAL	STATE	FEDERAL		FULL TIME	PART TIME
MARYLAND	MD State Training Center and Charles County Community College	1280	650	350	50 ——>		50	0	0	9.7	35.8	54.5	140	3	9
PENNSYLVANIA	Dept. of Community Affairs	5000	4100	369	0	0	100	0	0	86	14	0	79	0	100
VIRGINIA	Virginia State Water Control Board	2500	2000	1000	33	33	33	0	0	0	37.5	62.5	80	3	0
WEST VIRGINIA	Dept. of Health and Dept. of Education 109(b)	825	490	500	-	-	-	-	-	-	55	45	67	2	8
ALABAMA	Dept. of Environmental Mgmt. Municipal Water Section		100	800	10	80	10	0	0	0	1	99	58	1	9
FLORIDA	Dept of Environmental Regulations & TREEO Center 109(b)	5153	3517	-	-	-	-	-	-	95%	0	5%	-	3	4
GEORGIA	Water Quality Control Environmental Protection Division	1750	2329	195	5	50	30		15	0	55	45	322	9	0
KENTUCKY	Bureau of Environmental Protection, Division of Water	5000	4500	1000	21	21	68	-	-	0	0	100	207	2	2
MISSISSIPPI	Dept. of Environmental Protection, Field Services Division	1100	674	350	8	35	50	2	5	0	49	54	131	3	0
NORTH CAROLINA	Div. of Environmental Mgmt., Operations Branch	-	4700	1000	10	60	25						284	11	34

STATE	ORGANIZATION	NUMBER OF OPERATORS	NUMBER CERTIFIED	NUMBER TRAINED ANNUALLY	STATE TRAINING ACTIVITIES (EXPRESSED AS %)					SOURCES OF REVENUE (FY 1984) EXPRESSED AS %			TOTAL 1984 BUDGET ($1000)	STAFFING	
					CERTIFICATION	UPGRADE	TECHNICAL ASSIST	CONST. GRANTS MGMT	NPDES	LOCAL	STATE	FEDERAL		FULL TIME	PART TIME
SOUTH CAROLINA	Dept. of Environmental Protection - Clemson University Sumter TEC 109(b)	2900	2900	-	19	-	52	8	15	0	61	39	260	1	25
TENNESSEE	State Training Center	2000	1500	1900	40	40	20	0	0	0	90	10	495	6	0
ILLINOIS	Dept. of Environmental Protection and SIU State Center	3330	2416	200	20	52	23	0	5	50	35	15	771	8	53
INDIANA	Indiana State of Health Indiana Vocational Technical College (13)	1750	2228	380	160	200	20	-	-	14	41	45	262	3	13
MICHIGAN	Dept. of Natural Resources and Michigan State University	4473	2614	213	90	-	10	-	-	40	0	60	229	8	-
MINNESOTA	Minnesota Pollution Control Agency, Tech. Review Agency	2400	1400	900	10	30	10	50	-	10	71	19	400	12	81
OHIO	Ohio Environmental Protection Agency Operator Training Committee for Ohio - 109(b)	6000	4400	450	66	34	-	-	-	95	0	51	90	.5	63
WISCONSIN	Dept. of Natural Resources Division of Environmental Standards Office of Operation and Maintenance	3400	2400	1600	50	voc ed	50	else where	-		61	39	490	14	-

STATUS OF STATE TRAINING PROGRAMS

STATE	ORGANIZATION	NUMBER OF OPERATORS	NUMBER CERTIFIED	NUMBER TRAINED ANNUALLY	STATE TRAINING ACTIVITIES (EXPRESSED AS %)					SOURCES OF REVENUE (FY 1984) EXPRESSED AS %			TOTAL 1984 BUDGET ($1000)	STAFFING	
					CERTIFICATION	UPGRADE	TECHNICAL ASSIST	CONST. GRANTS MGMT	NPDES	LOCAL	STATE	FEDERAL		FULL TIME	PART TIME
ARKANSAS	Dept. of Pollution Control and Ecology-Environmental Academy (SAU Tech.)	1600	1000	535	30	25	35	0	10	0	60	40	200	3	20
LOUISIANA	Dept. of Environmental Quality, Dept. of Health	300 est.	1000	200	30	30	20	5	5	0	15	85	135	3	1
NEW MEXICO	NMSU Water Utilities Tech. Program-109(b) State Training Center-Environmental Improvement Division	UNK	700	480	-	55	40	-	5	20	51	29	182	2	3
OKLAHOMA	Dept. of Health Water Utilities Training Center-109(b) at Rose State College-Oklahoma City Health Dept.	3000	1000	3000	35	26	19	0	20	59	9	32	237	4	3
TEXAS	Dept. of Water Resources Dept. of Health-A&M Eng. Ext. Services	6500	5142	4700 est.	84	0	16	0	0	48	33	19	923	19	-
IOWA	109(b) Training Center	2151	1742	900	19	33	33	0	15	32	32	36	183	6	7
KANSAS	Dept. of Health and Environmental and Dept. of Education	1200	700	400	---->	100	0	0	0	12	71	17	380	5	18
MISSOURI	Dept. of Environmental Protection Compliance, Review Section and Regional Office Program Crowder Community College	1300	1500	1440	13	40	39	8	0	37	18	44	356	11	31

STATUS OF STATE TRAINING PROGRAMS

ATTACHMENT D (Page 5)

STATE	ORGANIZATION	NUMBER OF OPERATORS	NUMBER CERTIFIED	NUMBER TRAINED ANNUALLY	STATE TRAINING ACTIVITIES (EXPRESSED AS %)					SOURCES OF REVENUE (FY 1984) EXPRESSED AS %			TOTAL 1984 BUDGET ($1000)	STAFFING	
					CERTIFICATION	UPGRADE	TECHNICAL ASSIST	CONST. GRANTS MGMT	NPDES	LOCAL	STATE	FEDERAL		FULL TIME	PART TIME
NEBRASKA	Dept. of Environmental Control	798	479	N/A	0	0	---->	100	0	0	5	95	65	1	2
COLORADO	Division of Water Quality 109(b)	6000	5000	435	0	90	10	0	0	0	0	100	121	1	0
MONTANA	Water Quality Bureau Certification Separate	1500	1100	200	10	10	20	50	10	-	25	75		3	4
NORTH DAKOTA	Division of Water Supply and Pollution Control	475	325	185	40	40	20	-	-	0	0	100	42	1	1
SOUTH DAKOTA	Dept. of Water and Natural Resources		425	500	15	50	30	0	5	0	2	98	96	2	12
UTAH	Utah Technical College at Provo	250 (est)	140	300	10	35	50	0	5	17	40	43	116	2	1
WYOMING	State 109(b) Training Center	500	450	450	80	10	10	-	-	19	21	60	40	1	3
Arizona	Bureau of Water Quality Control Technical Services Section	1200	3000	840	-	-	30	-	-	29	54	17	83	1	11
CALIFORNIA	Water Quality Control Institute	-	4500		75	25	0	0	0	0	19	81	508		

5 of 6

STATUS OF STATE TRAINING PROGRAMS

STATE	ORGANIZATION	NUMBER OF OPERATORS	NUMBER CERTIFIED	NUMBER TRAINED ANNUALLY	STATE TRAINING ACTIVITIES (EXPRESSED AS %)					SOURCES OF REVENUE (FY 1984) EXPRESSED AS %			TOTAL 1984 BUDGET ($1000)	STAFFING	
					CERTIFICATION	UPGRADE	TECHNICAL ASSIST	CONST. GRANTS MGMT	NPDES	LOCAL	STATE	FEDERAL		FULL TIME	PART TIME
HAWAII	Dept. of Health Environmental Protection and Health Services Division Construction Grants Div.	400	339	-	0	30	60	0	10	0	0	100	25	-	6
ALASKA	Dept. Of Environmental Conservation	500	300	291	30	50	10	10	-	0	41	59	80.8	2	40
IDAHO	Water Quality Bureau Planning & Standards & State University 109(b)	350	333	400	15	50	15	15	5	41	49	10	194.6	3	3
OREGON	Water Quality Municipal Facilities	825 (est)	625	600	15	70	15	0	0	24	33	43	385.5	8	6
WASHINGTON	Dept. of Environmental Protection, Office of Operations & Enforcement & Construction Mgt. & Wash. Environmental Training Center	2000+	1400	1253	20	20	30	10	20	49	6	45	507	7	30